LBT-A37CDM/D259CD/D309CD/D359CD

SERVICE MANUAL

Canadian Model
LBT-D259CD

AEP Model
LBT-D259CD/D309CD/D359CD

UK Model
LBT-D259CD/D359CD

E Model

Australian Model

PX Model
LBT-A37CDM

These systems are composed of following models.
As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	A37CDM			D259CD			D309CD		D359CD	
	E	AUS	PX	AEP	UK	CND	AEP	G/EE/CIS	AEP	UK
Compact disc deck	HTC-D359			HTC-D259			HTC-D309		HTC-D359	
Stereo FM•AM receiver	STR-A37			STR-D259			STR-D309		STR-D359	
Turntable	—			PS-LX52P		—	PS-LX52P (Except for EE, CIS)			
Speaker system	SS-D270					SS-D170	—			

PARTS LIST

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

EE : East European model
CND: Canadian model
G : German model
AUS: Australian model

Parts No.	Description	Remarks
1-465-963-11	COMMANDER, STANDARD (RM-S271) (D259CD)	
1-466-982-11	COMMANDER, STANDARD (RM-S309) (except D259CD)	
1-501-374-11	ANTENNA, LOOP	
1-501-536-11	ANTENNA (AEP, G, EE, CIS)	
1-690-727-11	CORD (SPEAKER) (A37CDM)	
1-696-860-11	CORD, CONNECTION 13P	
3-707-584-01	COVER, BATTERY (FOR RM-S271)	
3-707-584-21	COVER, BATTERY (FOR RM-S309)	
3-756-332-11	MANUAL, INSTRUCTION (D309CD:AEP)	(English, French, Spanish, Portuguese)
3-756-332-41	MANUAL, INSTRUCTION (D309CD:AEP, G)	(German, Dutch, Swedish, Italian)
3-756-332-51	MANUAL, INSTRUCTION (D309CD:EE, CIS)	(English, German, Polish, Russian)
3-756-333-11	MANUAL, INSTRUCTION (D259CD:UK) (English)	
3-756-333-31	MANUAL, INSTRUCTION (CND) (English, French)	
3-756-333-41	MANUAL, INSTRUCTION (D259CD:AEP)	(English, French, Spanish, Portuguese)
3-756-333-51	MANUAL, INSTRUCTION (D259CD:AEP)	(German, Dutch, Swedish, Italian)
3-756-334-11	MANUAL, INSTRUCTION (D359CD:UK) (English)	
3-756-334-41	MANUAL, INSTRUCTION (D359CD:AEP)	(English, French, Spanish, Portuguese)
3-756-334-51	MANUAL, INSTRUCTION (D359CD:AEP)	(German, Dutch, Swedish, Italian)
3-756-334-71	MANUAL, INSTRUCTION (A37CDM)	(English, French, Spanish, Chinese)
* 4-956-900-01	CUSHION (UPPER) (D309CD)	
* 4-956-901-01	CUSHION (MIDDLE) (D309CD)	
* 4-956-902-01	CUSHION (LOWER) (D309CD)	
* 4-956-907-01	INDIVIDUAL, CARTON (D309CD:AEP, G)	
* 4-956-908-01	INDIVIDUAL, CARTON (D259CD:UK)	
* 4-956-909-01	INDIVIDUAL, CARTON (D359CD:UK)	
* 4-957-526-01	INDIVIDUAL, CARTON (D259CD:AEP)	
* 4-957-538-01	INDIVIDUAL, CARTON (CND)	
* 4-957-634-01	INDIVIDUAL, CARTON (D359CD:AEP)	
* 4-957-635-01	INDIVIDUAL, CARTON (A37CDM:AUS, PX)	
* 4-957-636-01	INDIVIDUAL, CARTON (A37CDM:E)	
* 4-958-549-01	CUSHION (D259CD, D359CD, A37CDM)	
* 4-960-227-01	INDIVIDUAL, CARTON (D309CD:EE, CIS)	

COMPACT HI-FI STEREO SYSTEM

SONY®

English
93G09072-1D
Printed in Japan

© 1993.7

Published by Audio Sector Quality Assurance Dept.

9-957-847-12

Sony Corporation
Audio Group

HTC-D209/D309

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

HTC-D209 is the compact disc deck in LBT-A27CD / A27CDK / D209CD.
HTC-D309 is the compact disc deck in LBT-A37CD / A37CDK / D309CD.

Photo: HTC-D209

SPECIFICATIONS

Cassette deck

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (±3 dB) With Type I cassette (Sony HF-S) 40 Hz to 13 kHz (±3 dB)
Wow and flutter	W.PEAK ±0.2% (DIN)

Compact disc player

Laser	Semiconducotr laser (λ =780 nm)
Laser output	Max, 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 93 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.008% (1 kHz)
Channel separation	More than 90 dB (1 kHz)

Mass	Approx. 5.1 kg
Dimensions	Approx. 355 × 225 × 305 mm (w/h/d, including projections)

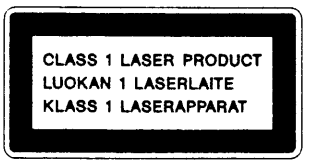
CD Section	Model Name Using Similar Mechanism		HCD-D109
	Base Unit Name		BU-5BD1
DECK Section	Model Name Using Similar Mechanism		HCD-H170/H170K /H700
	Tape Transport Mechanism Type	DECK A	TCM-190RA12CL
		DECK B	TCM-190RB22CL

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

COMPACT DISC DECK

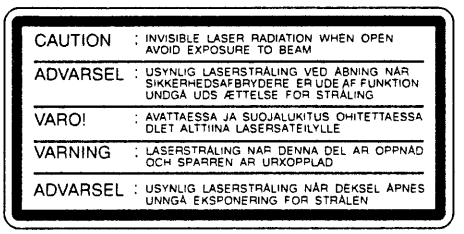
SONY

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDS ÆTTELSE FOR STRÅLING
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSATEILYLLE
VARNING : LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPARREN ÄR URKOPPLAD
ADVARSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

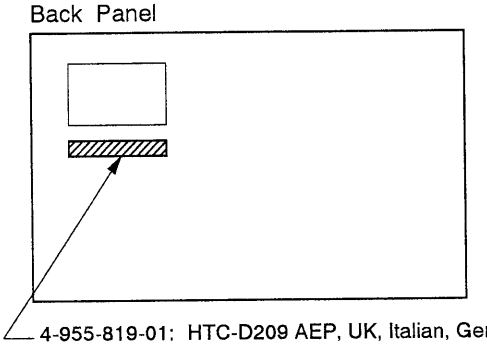
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Section	*Title*	*Page*
	Specifications	1
	Notes on Handling the Optical Pick-up Block or Base Unit	2
	Notes on Laser Diode Emission Check	2
1.	**GENERAL**	3
2.	**ADJUSTMENTS**	
2-1.	Mechanical Adjustments	4
2-2.	Electrical Adjustments	4
	Cassette Deck Section	4
	CD Section	7
3.	**DIAGRAMS**	
3-1.	CD Section Block Diagram	9
3-2.	Cassette Deck Section Block Diagram	11
3-3.	CD Section Printed Wiring Boards	14
3-4.	CD Section Schematic Diagram	17
3-5.	Cassette Deck Section Schematic Diagram	22
3-6.	Cassette Deck Section Printed Wiring Boards	27
4.	**EXPLODED VIEWS**	31
5.	**ELECTRICAL PARTS LIST**	37

MODEL IDENTIFICATION

Back Panel

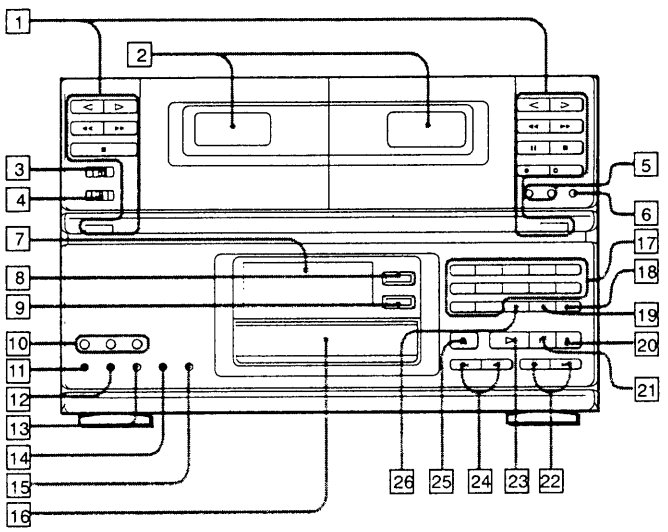


4-955-819-01: HTC-D209 AEP, UK, Italian, Germany Mdels.
4-955-819-11: HTC-D209 E, East European, Malaysia, Singapore Models.
4-955-819-21: HTC-D209 Saudi Arabia, Australian Models.
4-955-819-31: HTC-D309 AEP, UK, Italian, Germany Models.
4-955-819-41: HTC-D309 E, East European, Malaysia, Singapore, CIS Models.
4-955-819-51: HTC-D309 Saudi Arabia, Australian Models.

This section is extracted from instruction manual.

SECTION 1
GENERAL

Location of Controls



Cassette Deck

1 Tape operation buttons
- ◀◀ Leftward fast winding/AMS*
- ▶▶ Rightward fast winding/AMS*
- ▶ Forward play
- ◀ Reverse play
- ■ Stop
- ⏏ EJECT
- ❚❚ PAUSE (deck B only)
- O REC MUTE (record muting) (deck B only)
- ● REC (record) (deck B only)

2 Cassette holders
3 DOLBY NR (noise reduction) switch (32, 80)
4 DIRECTION MODE selector (28, 32, 38, 80)
5 DUBBING SPEED (HIGH/NORMAL) button (38, 40)
6 CD SYNCHRO button (80, 84)

Compact Disc Player

7 Display window
8 EDIT/TIME FADE button (86, 88, 94)
9 TIME SET button (86, 94)
10 PLAY MODE buttons
PROGRAM button (54)
SHUFFLE button (50, 52)
CONTINUE button (52)
11 MUSIC SCAN button (58)
12 A.SPACE/A.CUE (auto space/auto cue) button (48, 96)
13 TIME button (44)
14 REPEAT button (60)
15 FADER button (92)
16 Disc tray
17 Numeric buttons (46, 52)
18 CLEAR (program clear) button (56)
19 CHECK (program check) button (56)
20 ■ (stop) button (42)
21 ❚❚ (pause) button (42)
22 ◀◀/▶▶ (manual search) buttons (46)
23 ▶ (play) button (42)
24 ⏮/⏭ (AMS*) buttons (46)
25 OPEN/CLOSE ⏏ button (42)
26 >12 (over 12) button (46)

* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2
ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENTS

Precautions:

1. Clean the following parts with a denatured-alcoholmoistened swab;
   record/playback/erase head
   pinch roller rubber belts
   capstan idler
2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g·cm (0.03 to 0.08 oz·inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g·cm (0.03 to 0.08 oz·inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

2-2. ELECTRICAL ADJUSTMENTS

0 dB=0.775 V (AF)

Precautions:

CASSETTE DECK SECTION

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
  DOLBY NR switch : OFF
  TAPE : TYPE I

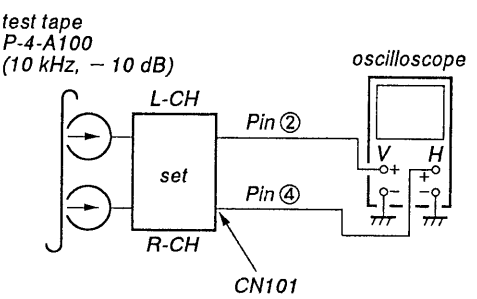
Type	Signal	Used for
P-4 A100	6.3kHz, −10dB	Azimath Adjustment
P-4 L300	315Hz, 0dB	PB Level Adjustment
WS 48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

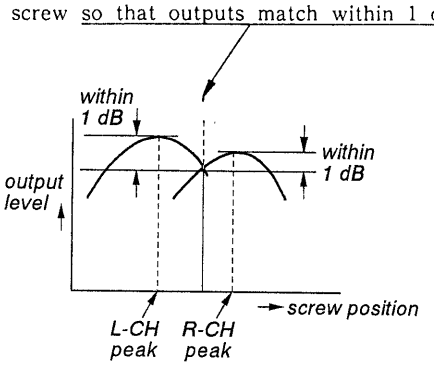
Note : Perform this adjustments for both decks.

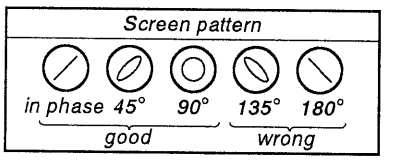
Procedure :

1. Mode : FWD playback



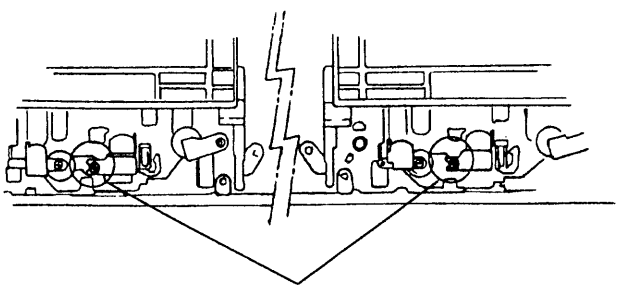
2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.





3. After the adjustments, apply suitable locking compound to the parts adjusted.

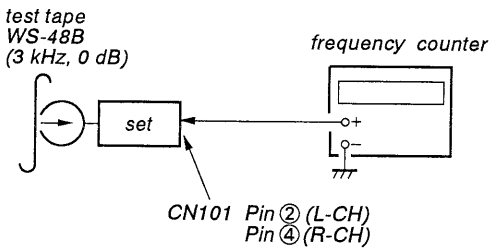
Adjustment Location :



Tape Speed Adjustment. DECK A DECK B

Procedure :

Mode : playback



- High speed adjustment (Must be first Adjustment B deck)
  1. Push HIGH speed button.
  2. Adjust RV71 so that the frequency counter reads 6,000±30Hz.

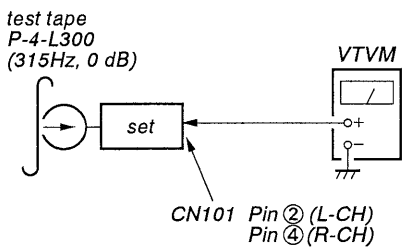
- NORMAL speed adjustment
  1. Push NORMAL speed button.
  2. Adjust RV72 so that the frequency counter reads 3,000±15Hz.

(See right for Adjusting Parts Location)

Frequency difference between deck A and deck B the beginning of the tape should be within 1%.

Playback Level Adjustment DECK A DECK B

Procedure :



Mode : FWD playback
DECK-A side RV11 (L-CH), RV21 (R-CH)
DECK-B side RV11 (L-CH), RV21 (R-CH)
so that the limits below are satisfied.

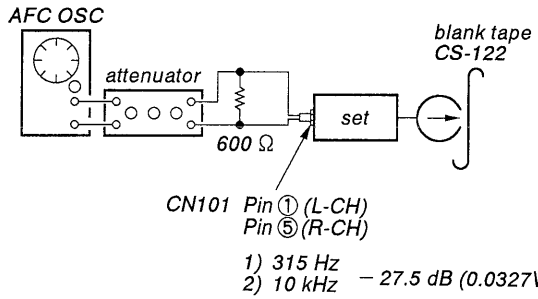
Adjustable limits :

CN101 level : − 7.7 ± 0.5 dB (0.301 − 0.338)
level difference between the channels : within 1.0dB
(See right for Adjusting Parts Location)

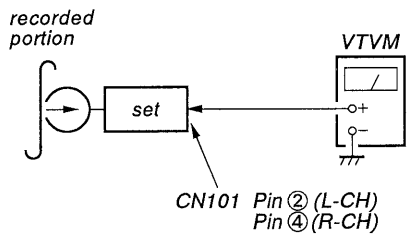
Record BIAS Current Adjustment DECK B

Procedure :

1. Mode : record



2. Mode : Playback



Playback the signal recorder in step 1.
Confirm that the 10kHz playback output is 0±0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.
(See right for Adjusting Parts Location)

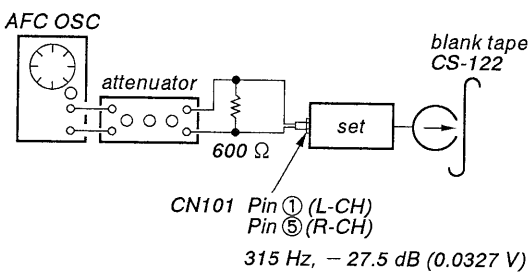
Record Level Adjustment DECK B

Setting :

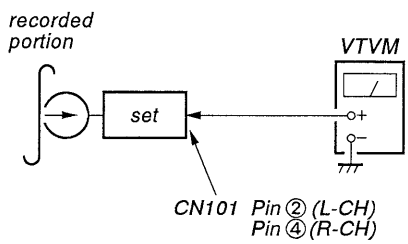
TAPE : TYPE I

Procedure :

1. Mode : record



2. Mode : playback

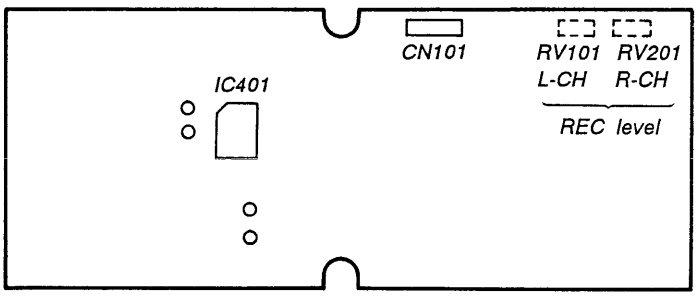


3. Playback the signal recorded in step 1.
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-3.

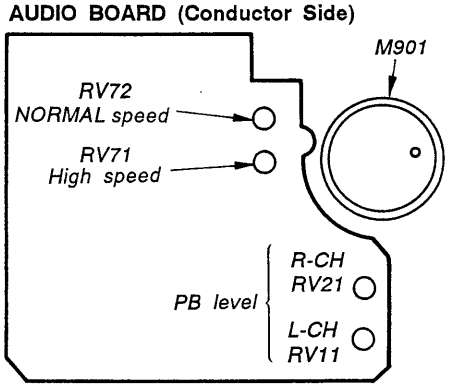
Adjustable limits : − 27.5 ± 0.5 dB (0.0309 − 0.0346)
(See right for Adjusting Parts Location)

• **Adjusting Parts Location**

TC MAIN BOARD (Conductor Side)



AUDIO BOARD (Conductor Side)

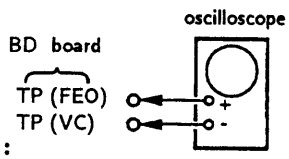


CD SECTION

Note :

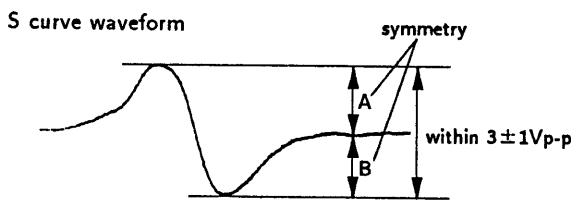
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

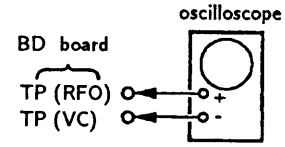


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

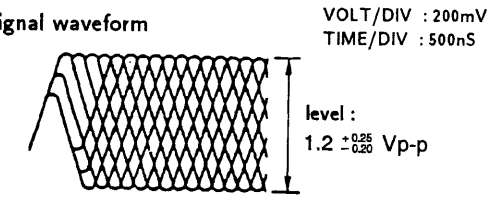


Procedure :

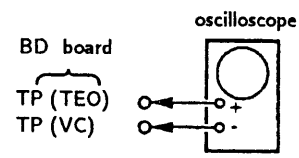
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

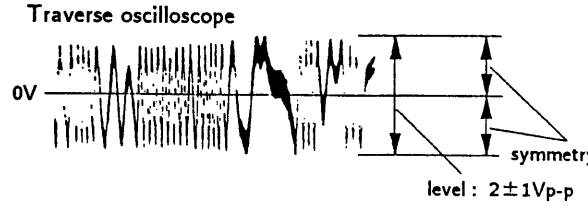


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

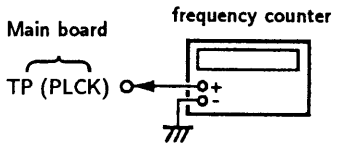


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

Focus/Tracking Gain

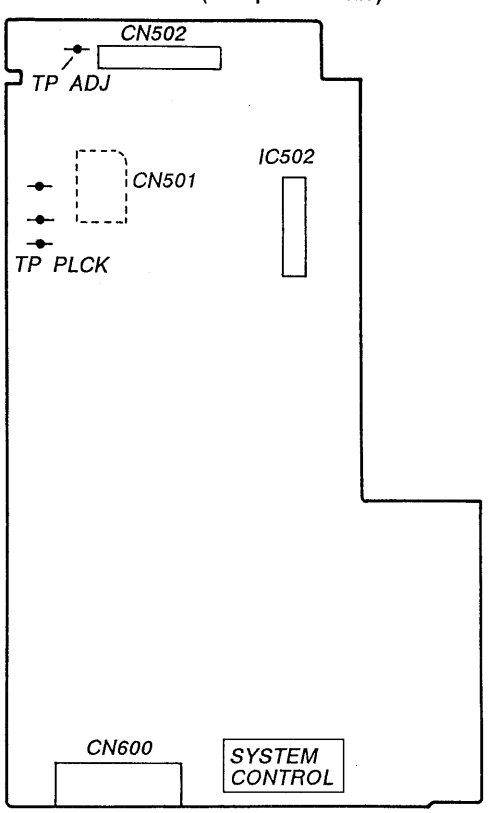
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

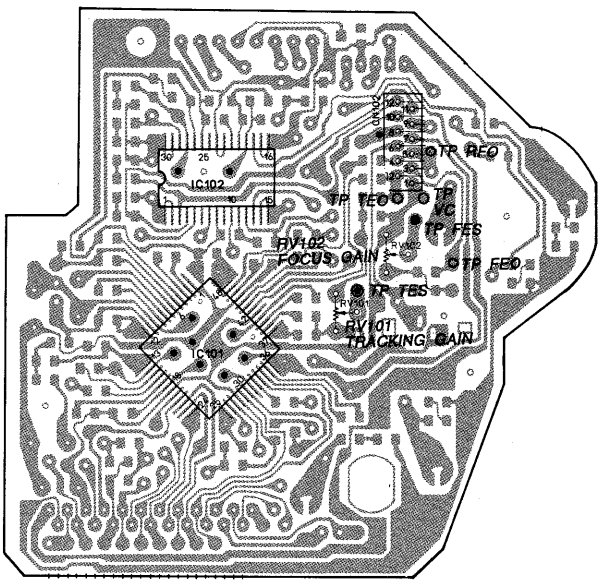
Adjustment Location ;

CD MAIN BOARD (Component Side)



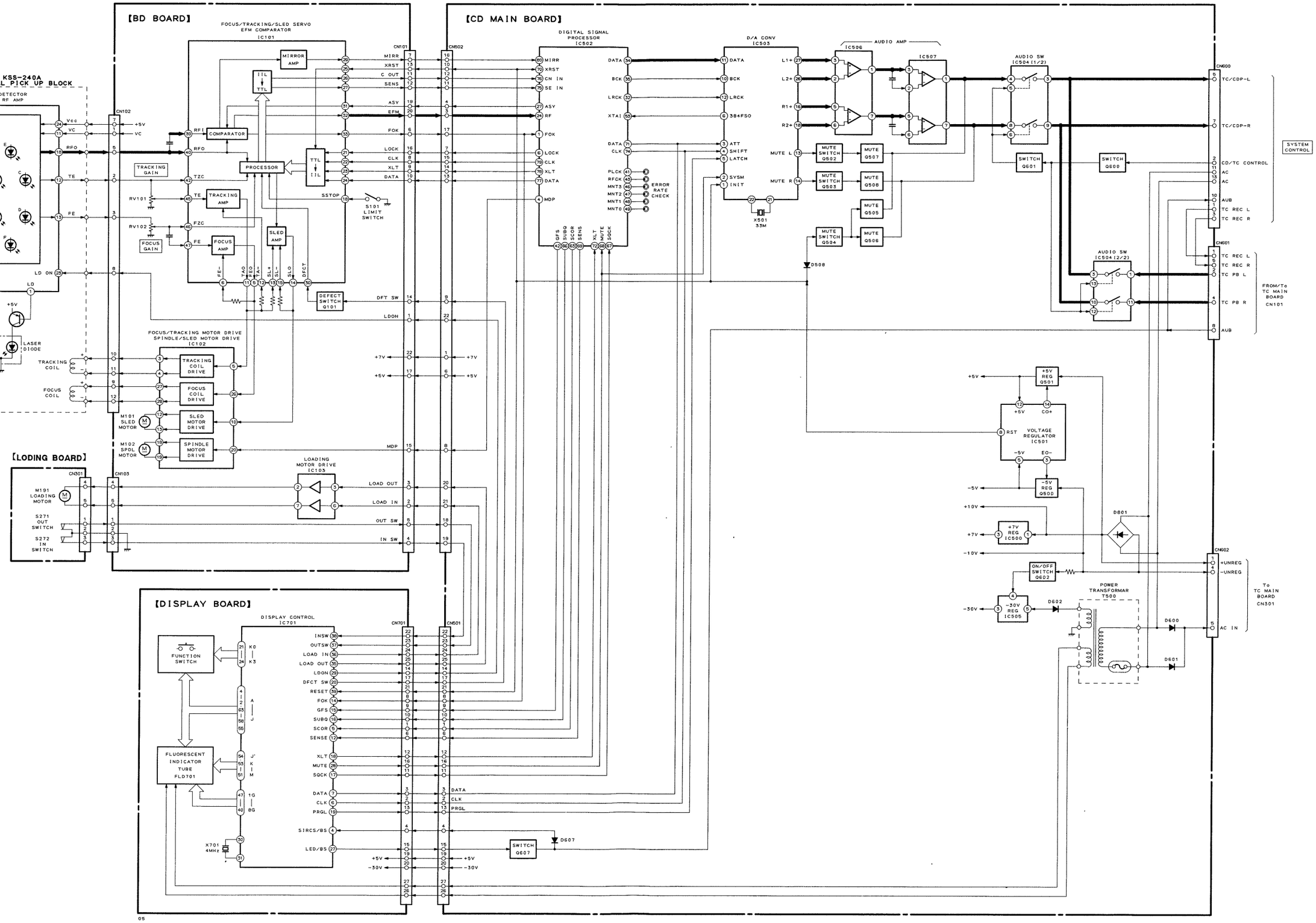
Adjustment Locations :
【BD board】

— conductor side —

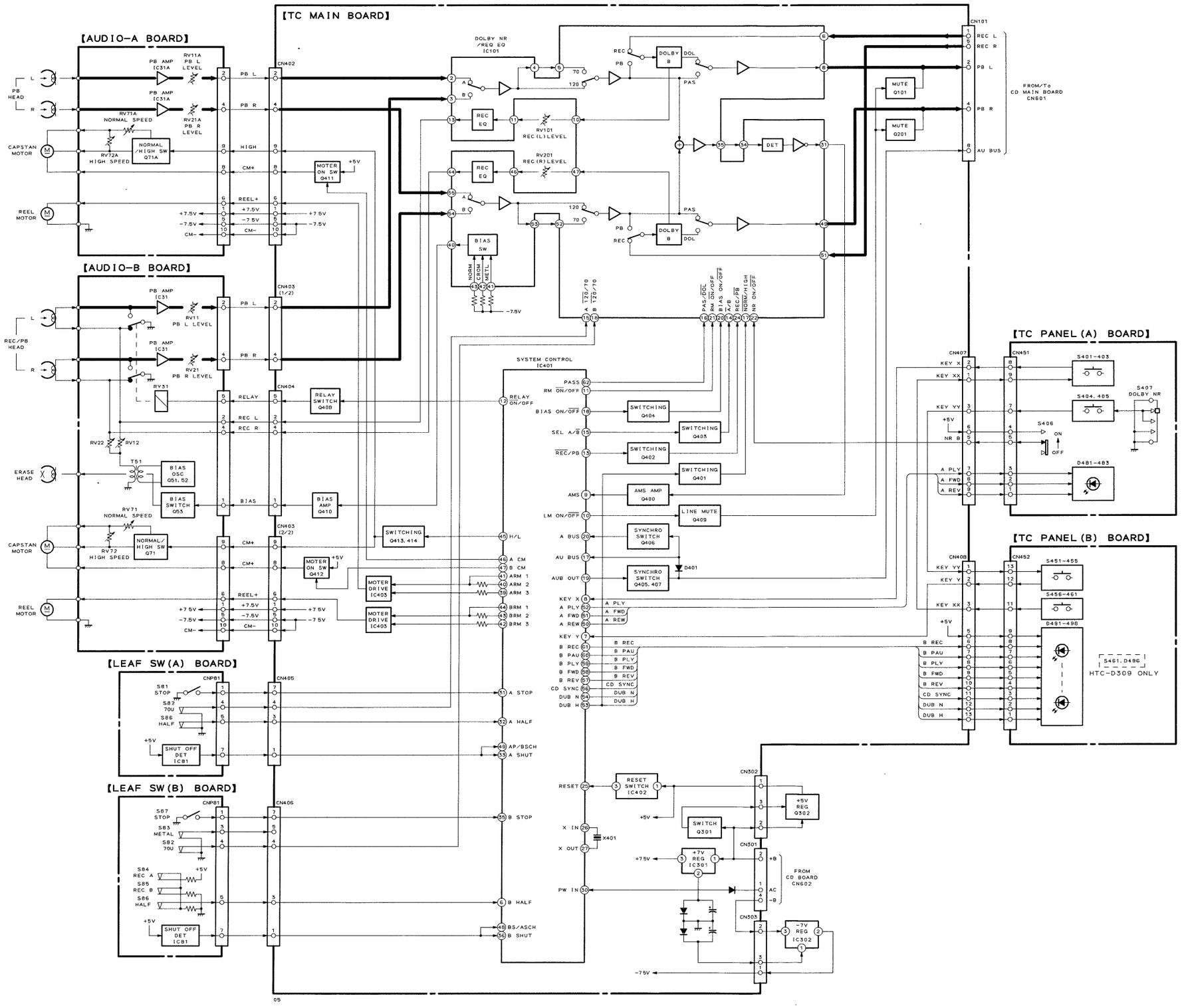


SECTION 3
DIAGRAMS

3-1. CD SECTION BLOCK DIAGRAM

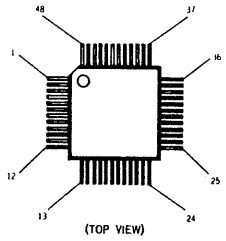


3-2. CASSETTE DECK SECTION BLOCK DIAGRAM

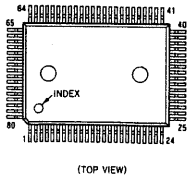


• Semiconductor Lead Layouts

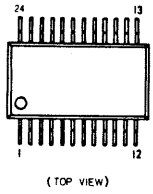
CXA1372AQ



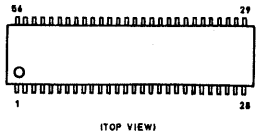
CXD2500BQ



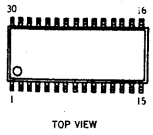
CXD2565M



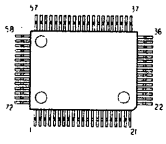
HA12171NT



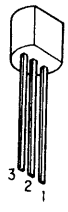
LA6532M



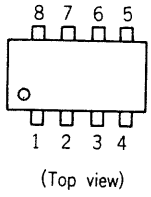
M50964-256FP



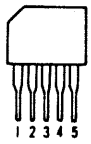
M51943BSL



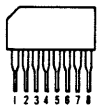
M5218AP



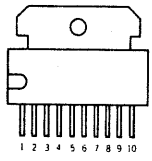
M5293L



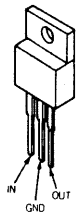
M54641L



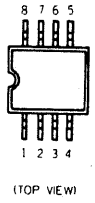
TA7272P



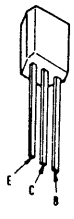
TA7807S



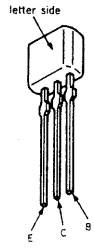
μPC4570G2



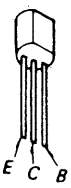
DTA144ES
DTC144ES



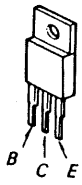
2SA1175-HFE
2SC2785-HFE
2SC3623A-LK



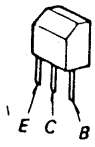
2SB1013-4
2SD1616A-K



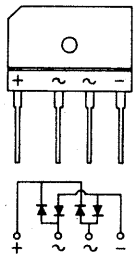
2SB1094-LK



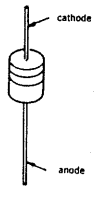
2SD774-34



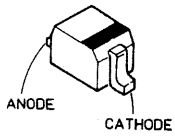
D2SB20



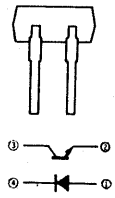
HZS9A2L
UZL-6L3
UZL-7L2
UZL-9H1
11ES2
11EQS04



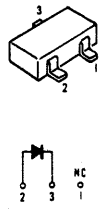
MA110



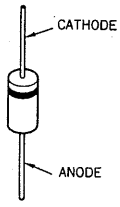
NJL5165K-B



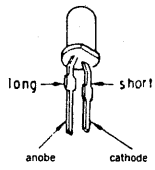
UZM4.7X



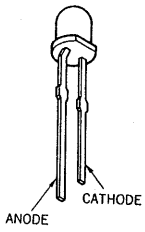
1N4148M



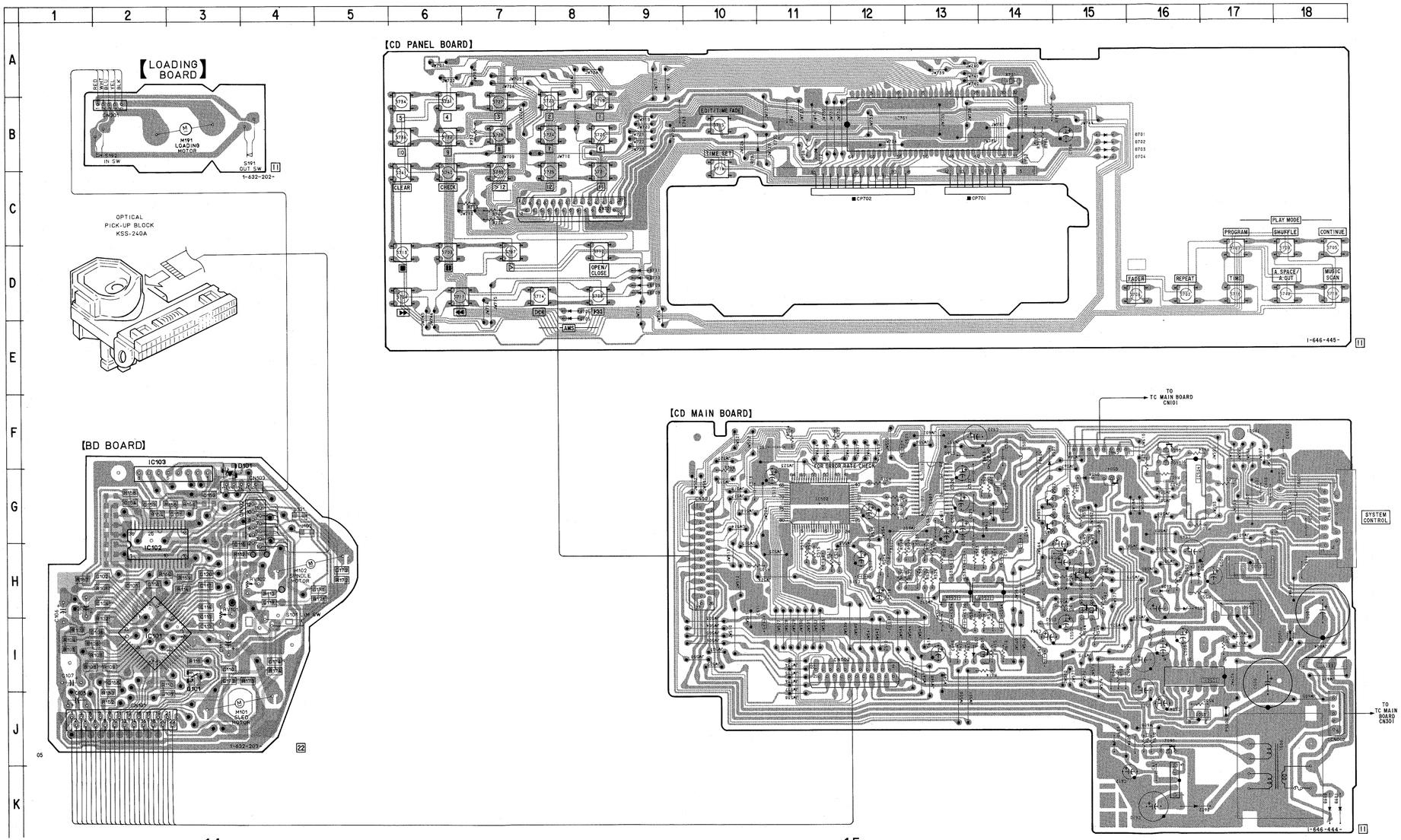
SEL2210S-CD
SEL2410E-TH10



SEL2810A



3-3. CD SECTION PRINTED WIRING BOARDS



Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

• Semiconductor Location

Ref. No.	Location
D101	G-3
D504	H-16
D505	H-16
D506	H-16
D507	F-14
D508	G-15
D600	K-18
D601	K-18
D602	K-16
D603	J-15
D607	I-13
D608	H-16
D701	B-15
D702	B-15
D703	B-15
D704	B-15
D705	E-8
D706	D-8
D707	B-11
D708	D-9
D709	D-9
D710	D-9
D711	B-11
D712	B-11
D801	I-18
IC101	I-2
IC102	H-2
IC103	G-2
IC500	H-17
IC501	I-16
IC502	G-11
IC503	G-13
IC504	G-16
IC505	K-16
IC506	H-13
IC507	H-14
IC701	B-13
Q101	I-3
Q500	J-16
Q501	H-17
Q502	G-14
Q503	G-14
Q504	G-15
Q505	H-15
Q506	H-15
Q507	H-15
Q508	H-15
Q600	F-16
Q601	F-16
Q602	J-16
Q605	I-14

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ⊖ ═══ : B + Line.
- ⊖ ▭▭▭ : B − Line.
- ⊖ ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark :CD PLAY (COMMON)
  ( ) :DECK A PB
  ≪ ≫ :DECK B PB
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD
  ⇨ : PB (DECK B)
  ⇨ : REC (DECK B)

【BD BOARD】

【CD PANEL BOARD】

【CD MAIN BOARD】

【LOADING BOARD】

⚠OPTICAL PICK UP BLOCK KSS-240A

IC101 CXA1572Q FOCUS/TRACKING ERR CONFIGURATION

IC102 LA6529M FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE

IC103 RS464JL SPINDLE MOTOR DRIVE

IC300 MSI9282FP DETECTOR RF AMP

IC701 DISPLAY CONTROL

IC502 DIGITAL SIGNAL PROCESSOR

IC503 CXD2565M

IC504 LINE SELECT

IC505 -5SV REG.

IC500 +7V REG.

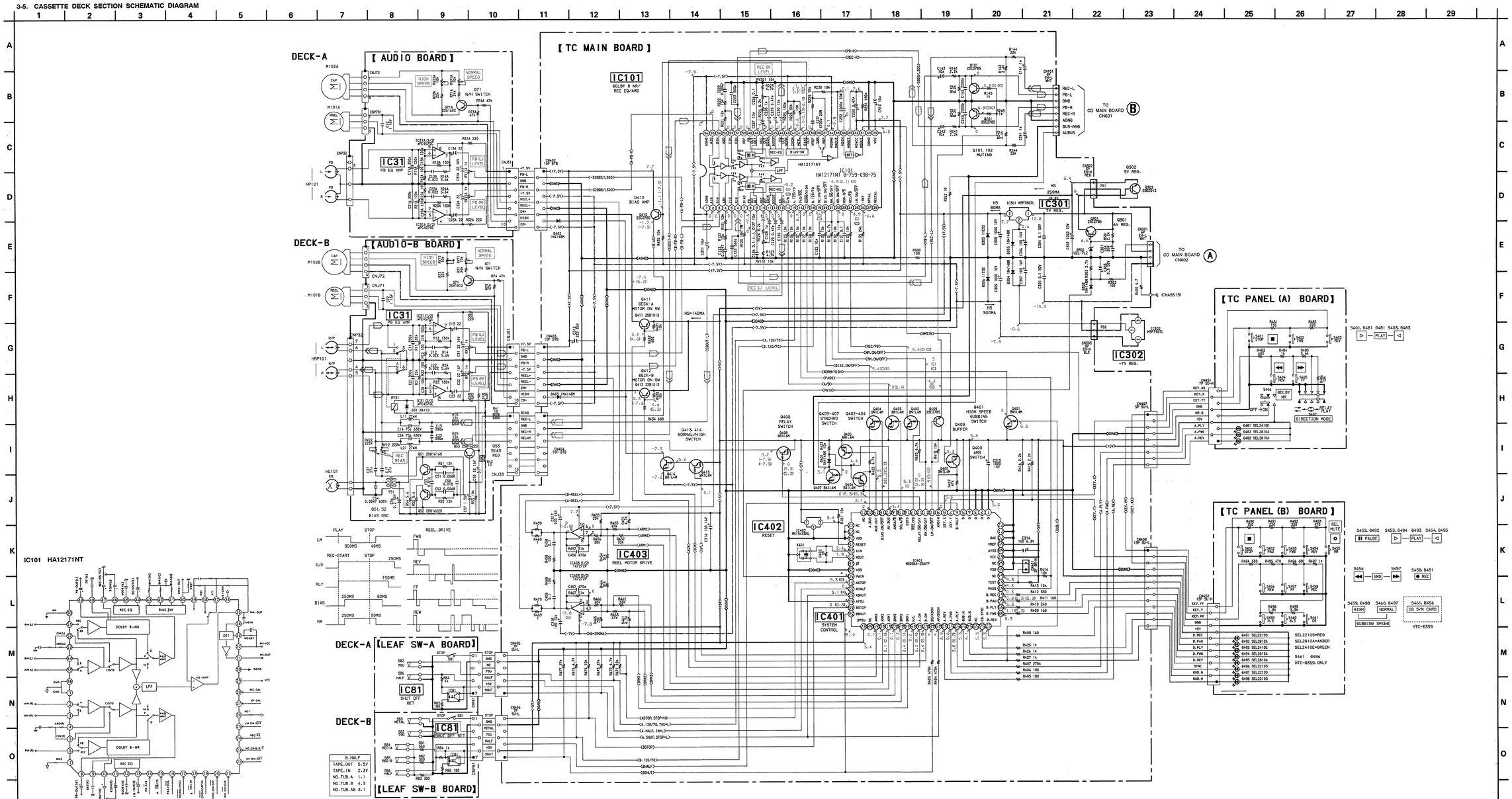
IC501 VOLTAGE REGULATOR

IC507 LINE AMP

IC503 D/A CONVERTER

IC506 L.P.F.

3-5. CASSETTE DECK SECTION SCHEMATIC DIAGRAM



Note on Schematic Diagram:

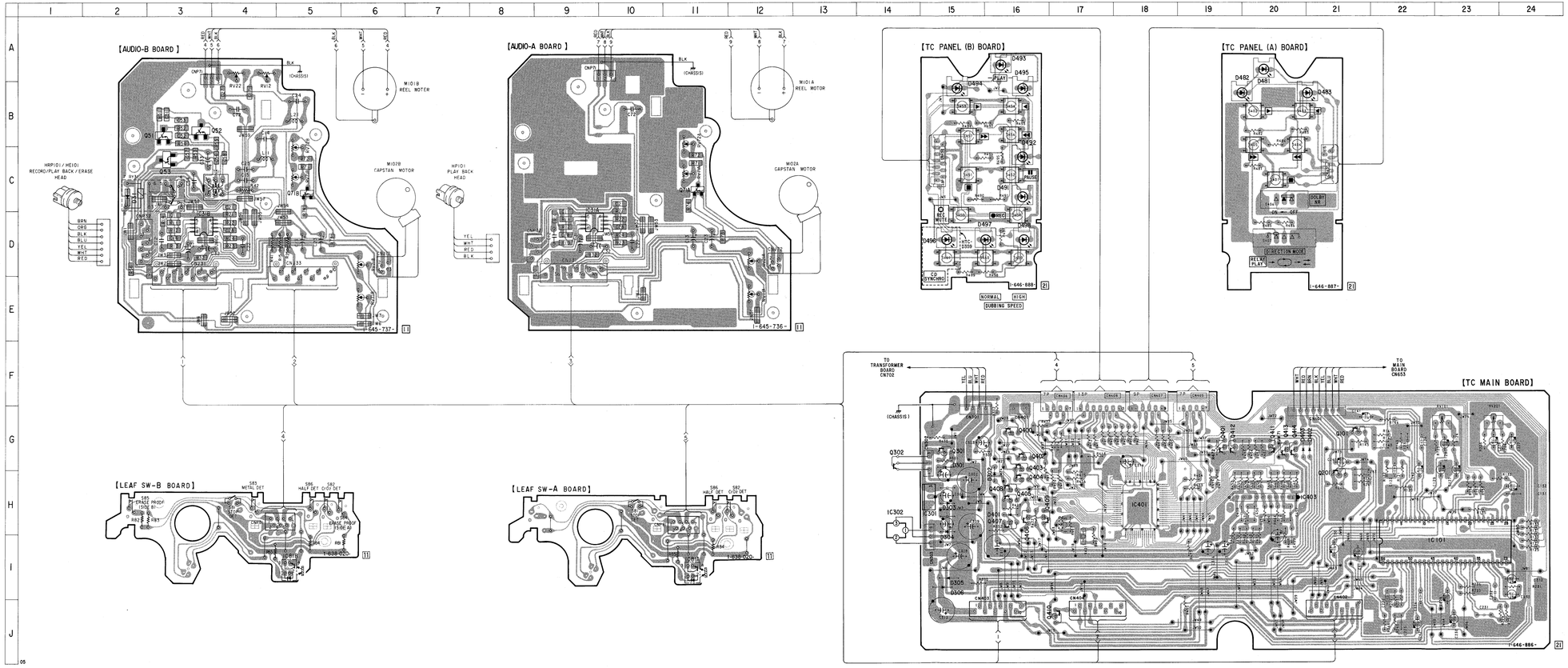
- All capacitors are in μF unless otherwise noted. pF: μμF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▭▭▭ : B + Line.
- ▭▭▭ : B − Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark :REC (COMMON)
  ( ):DECK A PB
  ≪ ≫ :DECK B PB
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : CD
  ▷ : PB (DECK B)
  ▷ : REC (DECK B)

3-6. CASSETTE DECK SECTION PRINTED WIRING BOARDS

• See page 13 for Semiconductor Lead Layouts.



• **Semiconductor Location**

Ref. No.	Location
D31	C-2
D301	G-15
D302	H-16
D303	H-15
D304	H-15
D305	I-15
D306	I-15
D401	H-16
D402	G-21
D403	G-20
D481	A-20
D482	B-19
D483	B-21
D491	C-16
D492	C-16
D493	A-16
D494	B-15
D495	B-16
D496	D-15
D497	D-16
D498	D-16
IC31A	D-9
IC31B	D-3
IC101	I-22
IC301	H-15
IC302	H-14
IC401	H-18
IC402	H-17
IC403	H-20
Q51	B-3
Q52	B-3
Q53	C-3
Q71A	C-11
Q71B	C-5
Q101	G-21
Q201	H-21
Q301	G-15
Q302	G-14
Q400	G-16
Q401	G-19
Q402	G-16
Q403	G-16
Q404	H-16
Q405	H-16
Q406	H-16
Q407	H-16
Q408	H-16
Q409	H-16
Q410	J-17
Q411	G-20
Q412	G-19
Q413	G-20
Q414	G-20

Note on Printed Wiring Board:

• ○——— : parts extracted from the component side.

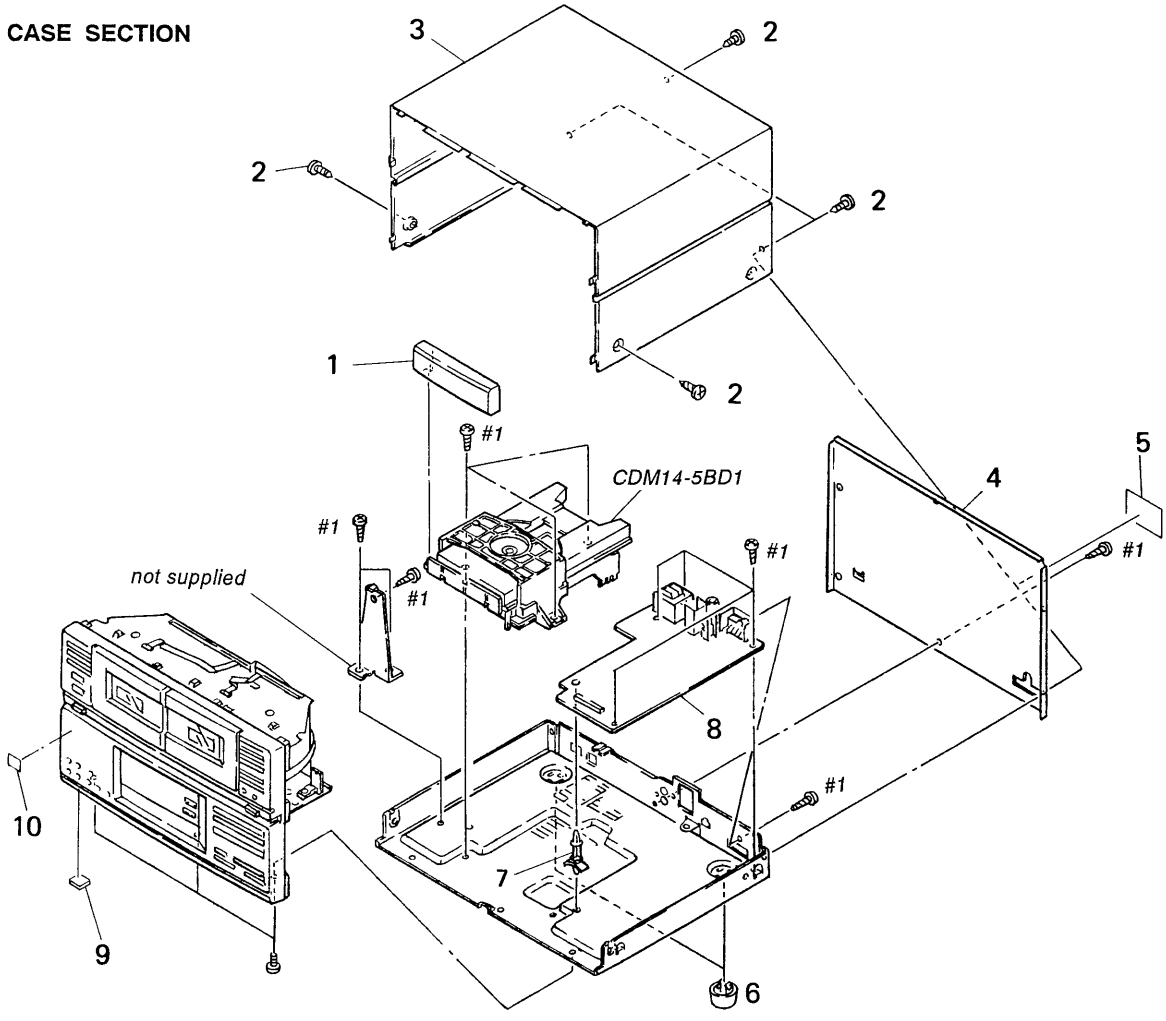
SECTION 4
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviations
  AUS: Australian Model
  EA: Saudi Arabia Model
  EE: East European Model
  G: Germany Model
  IT: Italian Model
  MY: Malaysia Model
  SP: Singapore Model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

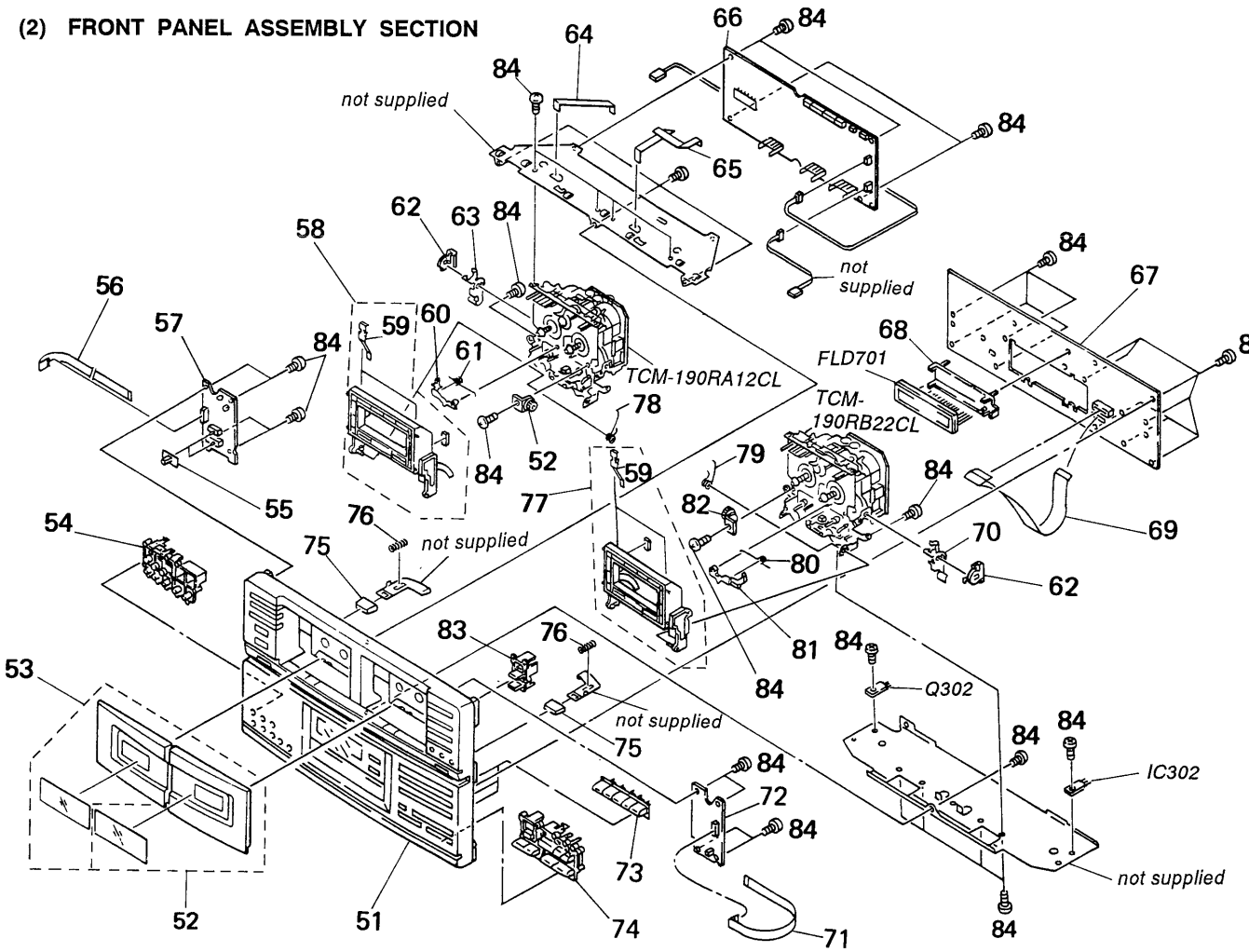
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-955-815-01	PANEL, LOADING	
2	3-363-099-01	SCREW (CASE 3 TP2) (D209:AUS/D309:UK, AUS)	
2	3-704-366-01	SCREW (CASE) (M3X8) (D209:AEP, UK, E, G, IT, EE, EA, MY, SP/D309:AEP, E, IT, G, EA, EE, MY, SP, CIS)	
* 3	4-955-759-31	CASE	
* 4	4-955-819-01	PANEL, BACK (D209:AEP, UK, G, IT)	
* 4	4-955-819-11	PANEL, BACK (D209:E, EE, MY, SP)	
* 4	4-955-819-21	PANEL, BACK (D209:EA, AUS)	
* 4	4-955-819-31	PANEL, BACK (D309:AEP, UK, G, IT)	
* 4	4-955-819-41	PANEL, BACK (D309:E, EE, MY, SP, CIS)	
* 4	4-955-819-51	PANEL, BACK (D309:EA, AUS)	
* 5	4-941-548-01	LABEL, CLASS 1	
6	X-4941-228-1	FOOT ASSY	
7	4-943-687-01	HOLDER, PC BOARD	
* 8	A-4356-652-A	CD MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 8	A-4356-661-A	CD MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	
9	4-948-236-01	CUSHION (107)	
* 10	3-703-713-41	STICKER, SONY SYMBOL (10) (D209:AUS/D309:UK, AUS)	

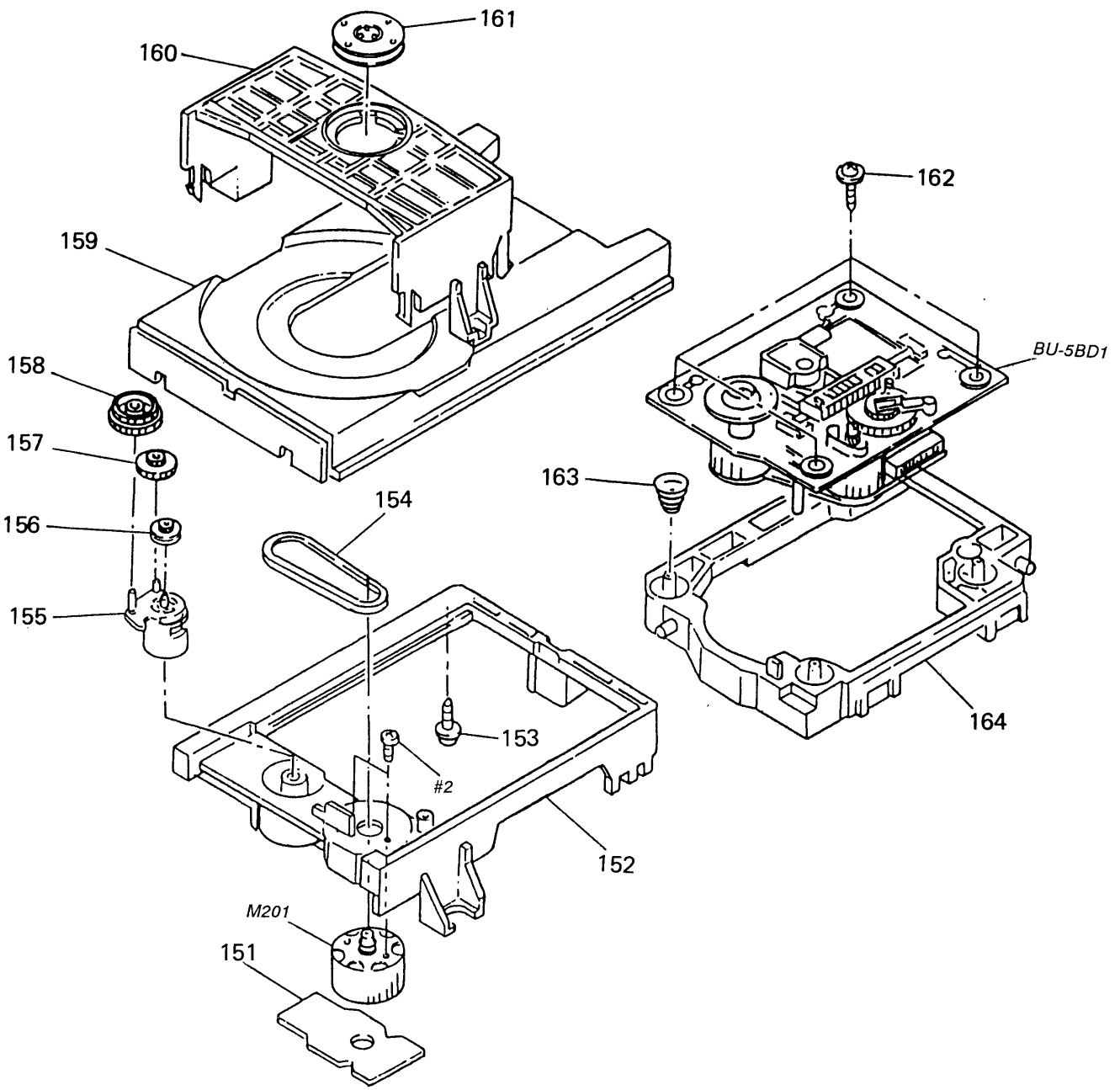
(2) FRONT PANEL ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark
51	X-4943-189-1	PANEL ASSY, FRONT (D209)	
51	X-4943-470-1	PANEL ASSY, FRONT (D309)	
52	X-4943-197-1	LID (B) ASSY, CASSETTE	
53	X-4943-196-1	LID (A) ASSY, CASSETTE	
54	4-955-812-01	BUTTON (CD-A)	
55	4-948-273-01	KNOB, SLIDE	
56	1-751-209-11	WIRE (FLAT TYPE) (9 CORE)	
* 57	1-646-887-11	TC PANEL (A) BOARD	
58	A-4325-163-A	HOLDER (L) ASSY, CASSETTE	
59	3-308-823-11	SPRING	
60	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
61	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
62	3-354-957-01	JOINT (LOCK LEVER)	
* 63	3-354-953-01	LEVER (LOCK LEVER L)	
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
* 66	A-4356-643-A	TC MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 66	A-4356-654-A	TC MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	
* 67	A-4356-653-A	CD PANEL BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 67	A-4356-662-A	CD PANEL BOARD, COMPLETE (D209:UK, G/D309:UK, G)	

Ref. No.	Part No.	Description	Remark
* 68	4-955-816-01	HOLDER (IF), FL TUBE	
69	1-690-729-11	WIRE, FLAT TYPE (27 CORE)	
* 70	3-354-954-01	LEVER (LOCK LEVER R)	
71	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D309:AUS)	
71	1-751-210-11	WIRE (FLAT TYPE) (13 CORE) (D209/D309: AEP, UK, E, G, IT, EE, EA, MY, SP, CIS)	
* 72	1-646-888-11	TC PANEL (B) BOARD	
73	4-955-741-01	BUTTON (PR)	
74	4-955-814-01	BUTTON (CD-C)	
75	4-935-355-41	BUTTON (EJECT)	
76	3-500-131-00	SPRING, COMPRESSION	
77	A-4325-164-A	HOLDER (R) ASSY, CASSETTE	
78	3-354-959-01	SPRING (LOADING L), TORSION	
79	3-354-960-01	SPRING (LOADING R), TORSION	
80	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
81	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
82	3-354-963-01	DAMPER	
83	4-955-813-01	BUTTON (CD-B)	
84	4-951-620-01	SCREW (2.6X8), +BVTP	
FLD701	1-519-681-21	INDICATOR TUBE, FLUORESCENT	
IC302	8-759-604-95	IC M5F79M07	
Q302	8-729-209-15	TRANSISTOR 2SD2012	

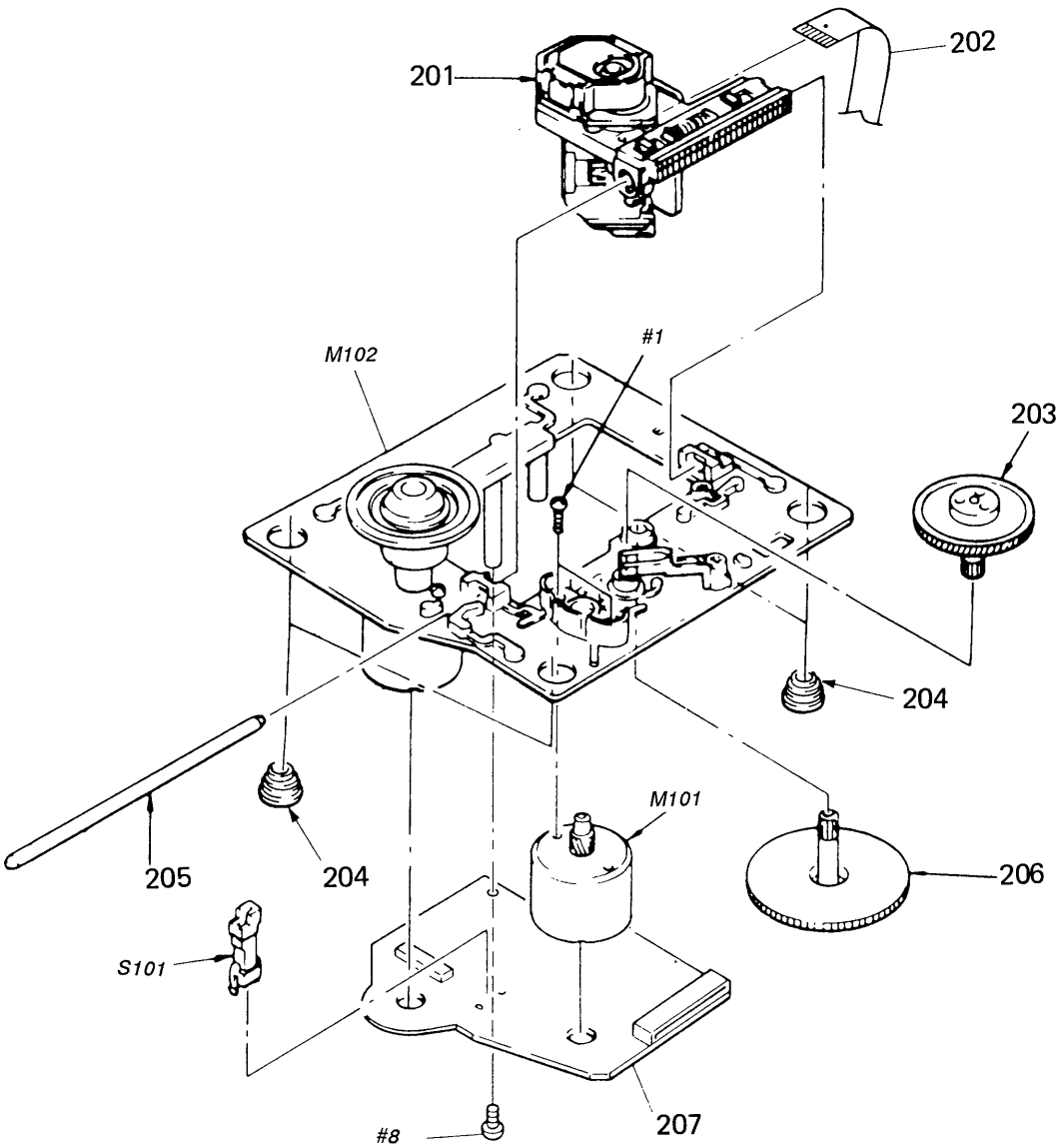
(3) CD MECHANISM SECTION (CDM14-5BD1)



Ref. No.	Part No.	Description	Remark
* 151	1-632-202-11	LOADING BOARD	
152	4-933-111-01	CHASSIS (MD)	
* 153	4-917-583-21	BRACKET, YOKE	
154	4-927-649-01	BELT	
155	4-933-109-01	CAM	
156	4-927-651-01	PULLEY (S)	
157	4-927-628-01	GEAR (C)	
158	4-933-107-01	GEAR (PL)	

Ref. No.	Part No.	Description	Remark
159	4-933-112-01	TABLE, DISK	
160	4-933-110-01	HOLDER (MG)	
* 161	1-452-538-11	MAGNET	
162	4-933-134-01	SCREW (+PTPWH M2.6X6)	
163	4-917-541-01	SPRING (B)	
164	4-933-129-01	HOLDER (BU)	
M201	A-4604-363-A	MOTOR (L) ASSY	

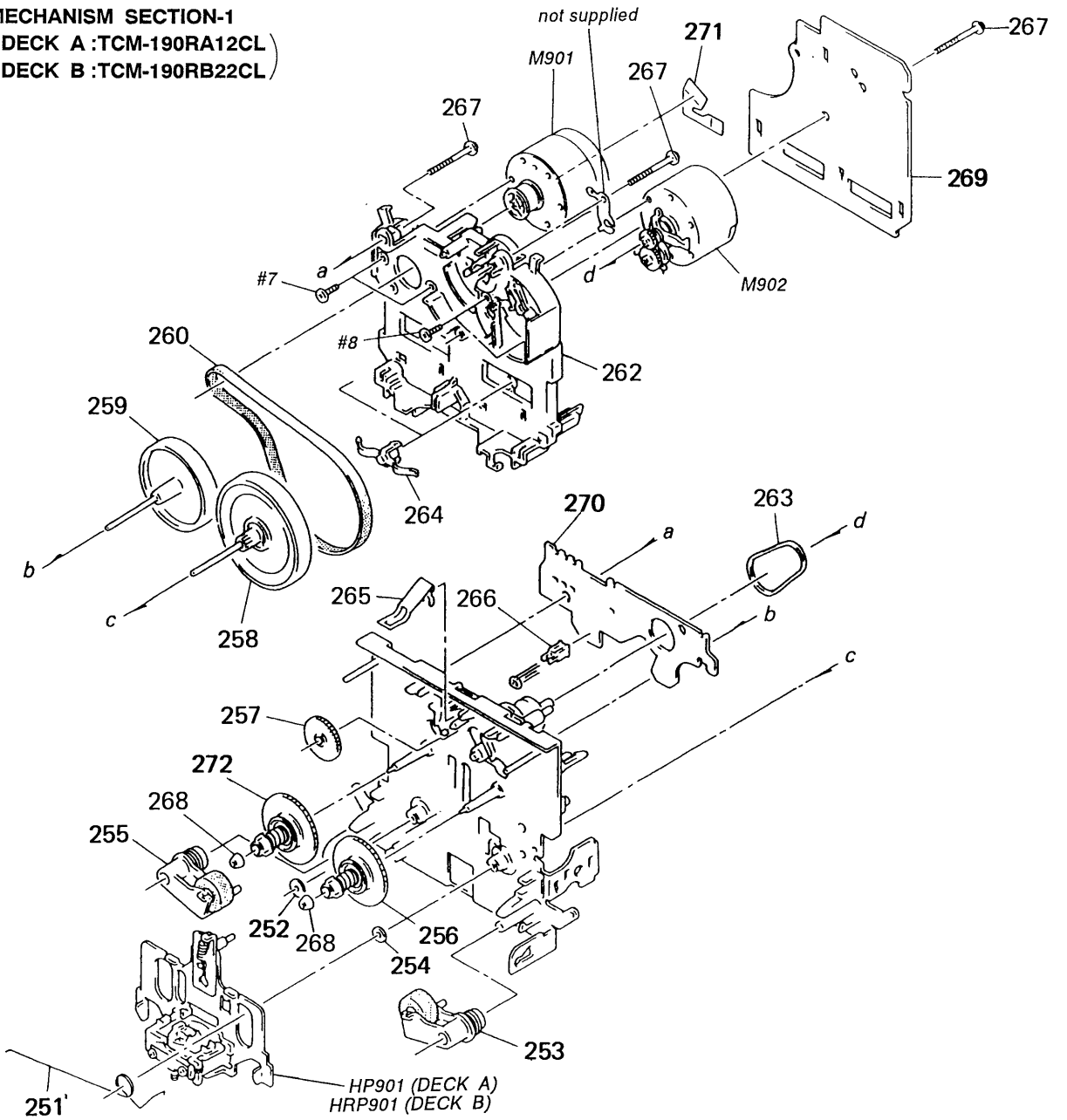
(4) OPTICAL PICK-UP BLOCK ASSEMBLY (BU-5BD1)



Ref. No.	Part No.	Description	Remark
⚠201	8-848-144-11	DEVICE, OPTICAL KSS-240A	
202	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
203	4-917-567-01	GEAR (M)	
204	4-933-126-01	INSULATOR (A)	
205	4-917-565-01	SHAFT, SLED	
206	4-917-564-01	GEAR (P), FLATNESS	
* 207	A-4617-371-A	BD BOARD, COMPLETE	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

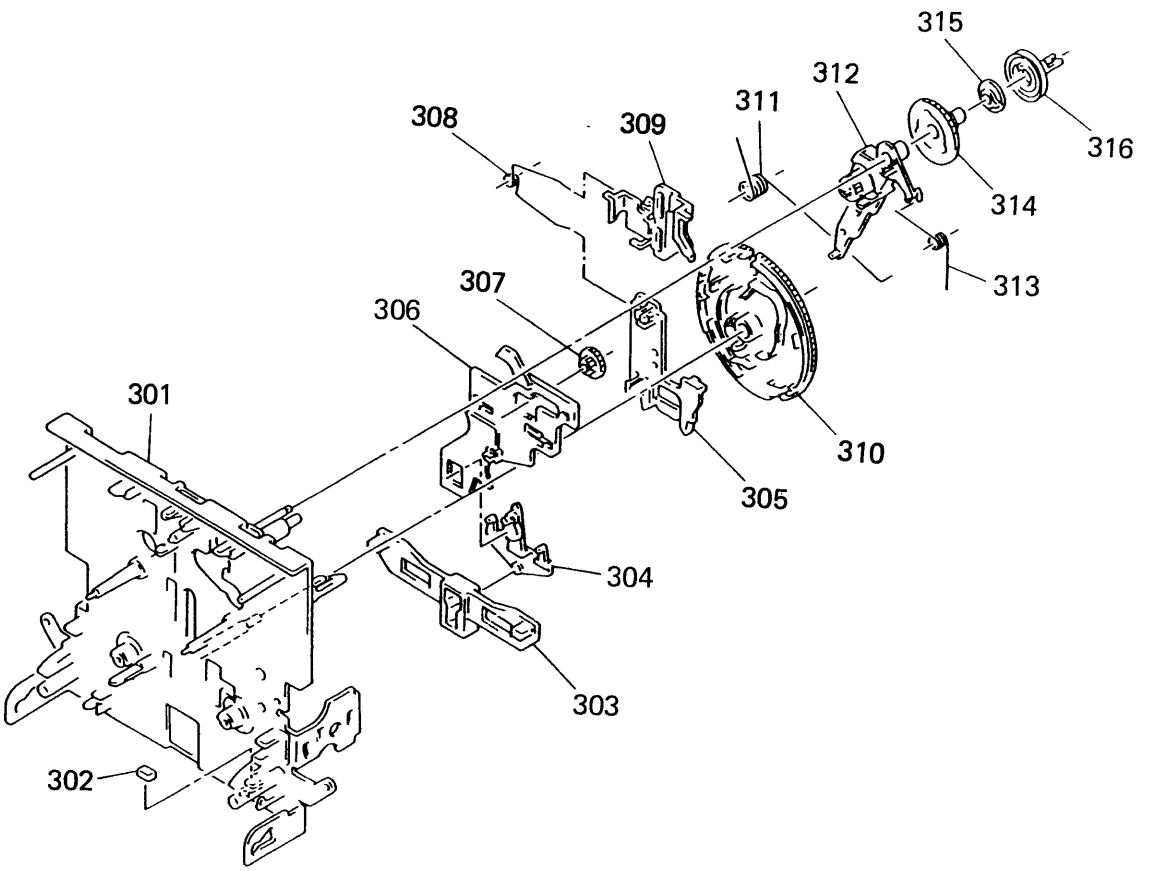
(5) MECHANISM SECTION-1
(DECK A :TCM-190RA12CL)
(DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark
251	3-359-455-01	SPRING, TORSION	
252	3-356-714-01	WASHER	
253	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
254	3-356-713-01	WASHER	
255	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
256	X-3359-404-1	TABLE ASSY, REEL	
257	3-359-424-01	GEAR (REV GEAR)	
258	X-3359-406-1	FLYWHEEL (FWD) ASSY	
259	X-3359-410-1	FLYWHEEL (REV) ASSY	
260	3-359-417-01	BELT (FLAT), CAPSTAN	
* 262	3-359-436-01	BASE (THRUST RETAINER), FITTING	
263	3-359-466-01	BELT (FR), SQUARE	
264	3-575-321-00	RETAINER, THRUST, CAPSTAN	

Ref. No.	Part No.	Description	Remark
265	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
266	3-343-419-01	HOLDER (S SENSOR A)	
267	3-359-414-01	SCREW (+PTPWH 2X23)	
268	3-362-308-01	CAP (REEL)	
* 269	A-2006-609-A	AUDIO BOARD, COMPLETE (DECK A)	
* 269	A-2006-610-A	AUDIO BOARD, COMPLETE (DECK B)	
* 270	1-638-020-11	LEAF SW BOARD	
271	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
272	X-3362-078-1	TABLE ASSY (B), REEL	
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)	
HRPE901	A-2004-190-A	DECK ASSY, HEAD (DECK B)	
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
M902	X-3363-501-1	MOTOR ASSY (REEL)	

(6) MECHANISM SECTION-2
(DECK A :TCM-190RA12CL
DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark
301	X-3359-415-1	CHASSIS ASSY, MECHANICAL	
302	3-359-469-01	SPACER	
* 303	3-359-425-01	SLIDER (REVERSE SLIDER)	
304	3-359-426-01	LEVER (REVERSE LEVER)	
* 305	3-359-427-01	SLIDER (LEVERSE SLIDER)	
* 306	3-359-415-01	SLIDER (TRIGGER SLIDER)	
307	3-359-448-01	GEAR (TRIGGER)	
308	3-359-454-01	SPRING, TORSION	

Ref. No.	Part No.	Description	Remark
309	3-359-429-01	SLIDER (BRAKE PLATE)	
310	3-359-420-01	GEAR (CAM GEAR)	
311	3-359-456-01	SPRING(TRIGGER SPRING),TORSION	
312	X-3359-405-1	LEVER (FR ARM) ASSY	
313	3-359-453-01	SPRING (FR ARM), TORSION	
314	3-359-419-01	GEAR (FR GEAR)	
315	3-359-421-01	CLUTCH (REEL DISK)	
316	3-359-418-01	PULLEY (FR PULLEY)	

SECTION 5
ELECTRICAL PARTS LIST

AUDIO-A **AUDIO-B**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH
- Abbreviations
  AUS: Australian Model
  EA: Saudi Arabia Model
  EE: East European Model
  G: Germany Model
  IT: Italian Model
  MY: Malaysia Model
  SP: Singapore Model

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-2006-623-A	AUDIO-A BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< JACK >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
		< CONNECTOR >			
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
		< TRANSISTOR >			
Q71	8-729-216-22	TRANSISTOR 2SA1162-G			
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-238-012-11	RES, ADJ, CARBON	1K		
RV21	1-238-012-11	RES, ADJ, CARBON	1K		
RV71	1-238-016-11	RES, ADJ, CARBON	10K		
RV72	1-238-016-11	RES, ADJ, CARBON	10K		
**********					
*	A-2006-624-A	AUDIO-B BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C14	1-136-273-91	FILM	75PF	5%	630V
C15	1-164-080-11	CERAMIC	390PF	10%	50V

AUDIO-B

Ref. No.	Part No.	Description			Remark
C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C24	1-136-273-91	FILM	75PF	5%	630V
C25	1-164-080-11	CERAMIC	390PF	10%	50V
C27	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C54	1-136-559-11	FILM	0.0047uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< JACK >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
		< CONNECTOR >			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< DIODE >			
D31	8-719-404-46	DIODE MA110			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-296-00	METAL CHIP	0	5%	1/8W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W
JW4	1-216-295-00	METAL CHIP	0	5%	1/10W
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W
JW56	1-216-296-00	METAL CHIP	0	5%	1/8W
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W
JW62	1-216-296-00	METAL CHIP	0	5%	1/8W
JW63	1-216-296-00	METAL CHIP	0	5%	1/8W
		< COIL >			
L11	1-410-780-11	INDUCTOR 27mH			
L21	1-410-780-11	INDUCTOR 27mH			
		< TRANSISTOR >			
Q51	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q52	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q53	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q71	8-729-216-22	TRANSISTOR 2SA1162-G			
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R15	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R25	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R41	1-249-393-11	CARBON	10	5%	1/4W F
R42	1-249-393-11	CARBON	10	5%	1/4W F
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-238-012-11	RES, ADJ, CARBON 1K			
RV12	1-238-551-11	RES, ADJ, CARBON 220K			
RV21	1-238-012-11	RES, ADJ, CARBON 1K			

Ref. No.	Part No.	Description			Remark
RV22	1-238-551-11	RES, ADJ, CARBON 220K			
RV71	1-238-016-11	RES, ADJ, CARBON 10K			
RV72	1-238-016-11	RES, ADJ, CARBON 10K			
		< RELAY >			
RY31	1-515-726-11	RELAY			
		< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION			
**********					
	A-4617-161-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D101	8-719-021-25	DIODE UZM4.7X			
		< IC >			
IC101	8-752-058-77	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
IC103	8-759-633-65	IC M54641L			
		< JACK >			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		< MOTOR >			
M101	X-4917-504-1	MOTOR ASSY (SLED)			
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-238-016-11	RES, ADJ, CARBON 10K			
RV102	1-238-016-11	RES, ADJ, CARBON 10K			

CD MAIN

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					
*	A-4356-652-A	CD MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)			
		**********			
*	A-4356-661-A	CD MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C500	1-124-564-11	ELECT	4700uF	20%	25V
C501	1-126-946-11	ELECT	6800uF	20%	25V
C502	1-126-176-11	ELECT	220uF	20%	10V
C503	1-124-907-11	ELECT	10uF	20%	50V
C504	1-124-903-11	ELECT	1uF	20%	50V
C505	1-124-907-11	ELECT	10uF	20%	50V
C506	1-124-472-11	ELECT	470uF	20%	10V
C507	1-164-159-11	CERAMIC	0.1uF		50V
C508	1-124-472-11	ELECT	470uF	20%	10V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-136-165-00	FILM	0.1uF	5%	50V
C511	1-136-165-00	FILM	0.1uF	5%	50V
C512	1-124-443-00	ELECT	100uF	20%	10V
C513	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-136-161-00	FILM	0.047uF	5%	50V
C516	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C517	1-124-443-00	ELECT	100uF	20%	10V
C518	1-124-902-00	ELECT	0.47uF	20%	50V
C519	1-136-153-00	FILM	0.01uF	5%	50V
C520	1-124-443-00	ELECT	100uF	20%	10V
C521	1-136-165-00	FILM	0.1uF	5%	50V
C522	1-124-472-11	ELECT	470uF	20%	10V
C524	1-126-176-11	ELECT	220uF	20%	10V
C525	1-164-159-11	CERAMIC	0.1uF		50V
C526	1-124-443-00	ELECT	100uF	20%	10V
C527	1-161-494-00	CERAMIC	0.022uF		25V
C528	1-162-196-31	CERAMIC	5.6PF	10%	50V
C529	1-162-196-31	CERAMIC	5.6PF	10%	50V
C530	1-124-443-00	ELECT	100uF	20%	10V
C531	1-161-494-00	CERAMIC	0.022uF		25V
C532	1-162-283-31	CERAMIC	120PF	10%	50V
C533	1-162-283-31	CERAMIC	120PF	10%	50V
C534	1-110-335-11	MYLAR	100PF	5%	50V
C534	1-137-358-91	FILM	0.0001uF	5%	50V
C535	1-110-335-11	MYLAR	100PF	5%	50V

Ref. No.	Part No.	Description			Remark
C535	1-137-358-91	FILM	0.0001uF	5%	50V
C536	1-110-335-11	MYLAR	100PF	5%	50V
C536	1-137-358-91	FILM	0.0001uF	5%	50V
C537	1-110-335-11	MYLAR	100PF	5%	50V
C537	1-137-358-91	FILM	0.0001uF	5%	50V
C538	1-164-159-11	CERAMIC	0.1uF		50V
C539	1-164-159-11	CERAMIC	0.1uF		50V
C542	1-130-471-00	MYLAR	0.001uF	5%	50V
C542	1-137-364-11	FILM	0.001uF	5%	50V
C543	1-130-471-00	MYLAR	0.001uF	5%	50V
C543	1-137-364-11	FILM	0.001uF	5%	50V
C544	1-124-907-11	ELECT	10uF	20%	50V
C545	1-124-907-11	ELECT	10uF	20%	50V
C548	1-124-472-11	ELECT	470uF	20%	10V
C549	1-124-443-00	ELECT	100uF	20%	10V
C550	1-124-907-11	ELECT	10uF	20%	50V
C551	1-124-907-11	ELECT	10uF	20%	50V
C552	1-164-159-11	CERAMIC	0.1uF		50V
C553	1-164-159-11	CERAMIC	0.1uF		50V
C554	1-130-480-00	MYLAR	0.0056uF	5%	50V
C554	1-137-437-11	FILM	0.0056uF	5%	50V
C555	1-130-480-00	MYLAR	0.0056uF	5%	50V
C555	1-137-437-11	FILM	0.0056uF	5%	50V
C560	1-164-159-11	CERAMIC	0.1uF		50V
C561	1-164-159-11	CERAMIC	0.1uF		50V
C600	1-162-286-31	CERAMIC	220PF	10%	50V
C601	1-162-294-31	CERAMIC	0.001uF	10%	50V
C602	1-162-286-31	CERAMIC	220PF	10%	50V
C603	1-110-339-11	MYLAR	220PF	5%	50V
C603	1-137-360-91	FILM	220PF	5%	50V
C604	1-110-339-11	MYLAR	220PF	5%	50V
C604	1-137-360-91	FILM	220PF	5%	50V
C605	1-164-159-11	CERAMIC	0.1uF		50V
C607	1-161-494-00	CERAMIC	0.022uF		25V
C608	1-164-159-11	CERAMIC	0.1uF		50V
C609	1-164-159-11	CERAMIC	0.1uF		50V
C610	1-124-572-11	ELECT	100uF	20%	63V
C611	1-164-159-11	CERAMIC	0.1uF		50V
C612	1-124-907-11	ELECT	10uF	20%	50V
C613	1-164-159-11	CERAMIC	0.1uF		50V
C614	1-124-443-00	ELECT	100uF	20%	10V
C615	1-124-472-11	ELECT	470uF	20%	10V
C616	1-164-159-11	CERAMIC	0.1uF		50V
C801	1-162-290-31	CERAMIC	470PF	10%	50V
		< CONNECTOR >			
* CN501	1-568-842-11	SOCKET, CONNECTOR 27P			
* CN502	1-568-822-11	SOCKET, CONNECTOR 22P			
* CN600	1-565-291-11	SOCKET, CONNECTOR 13P (SYSTEM CONTROL)			

Ref. No.	Part No.	Description	Remark
* CN601	1-564-511-11	PLUG, CONNECTOR 8P	
		< DIODE >	
D504	8-719-000-54	DIODE UZL-6L3	
D505	8-719-987-63	DIODE 1N4148M	
D506	8-719-000-54	DIODE UZL-6L3	
D507	8-719-210-21	DIODE 11EQS04	
D508	8-719-987-63	DIODE 1N4148M	
D600	8-719-200-82	DIODE 11ES2	
D601	8-719-200-82	DIODE 11ES2	
D602	8-719-200-82	DIODE 11ES2	
D603	8-719-933-54	DIODE HZS9A2L	
D607	8-719-987-63	DIODE 1N4148M	
D608	8-719-987-63	DIODE 1N4148M	
D801	8-719-500-36	DIODE D2SB20	
		< FERRITE BEAD >	
FB601	1-412-473-21	INDUCTOR 0UH	
FB602	1-412-473-21	INDUCTOR 0UH	
FB603	1-412-473-51	INDUCTOR 0UH	
FB604	1-412-473-21	INDUCTOR 0UH	
		< IC >	
IC500	8-759-071-48	IC TA7807S	
IC501	8-759-630-21	IC M5290P-16	
IC502	8-752-352-93	IC CXD2500BQ	
IC503	8-752-355-45	IC CXD2565M	
IC504	8-759-000-49	IC MC14066BCP	
IC505	8-759-633-42	IC M5293L	
IC506	8-759-634-51	IC M5218AP	
IC507	8-759-634-51	IC M5218AP	
		< COIL >	
L501	1-410-513-11	INDUCTOR 22uH	
		< IC LINK >	
PS500	1-532-685-00	LINK, IC	
PS501	1-532-637-00	LINK, IC 1.0A	
		< TRANSISTOR >	
Q500	8-729-140-96	TRANSISTOR 2SD774-34	
Q501	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q502	8-729-900-65	TRANSISTOR DTA144ES	
Q503	8-729-900-65	TRANSISTOR DTA144ES	
Q504	8-729-900-65	TRANSISTOR DTA144ES	
Q505	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q506	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q507	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q600	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q601	8-729-900-89	TRANSISTOR DTC144ES	
Q602	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R500	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R501	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R502	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R504	1-249-417-11	CARBON 1K 5% 1/4W F	
R505	1-249-417-11	CARBON 1K 5% 1/4W F	
R506	1-249-417-11	CARBON 1K 5% 1/4W F	
R507	1-249-417-11	CARBON 1K 5% 1/4W F	
R511	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R512	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R513	1-249-429-11	CARBON 10K 5% 1/4W	
R514	1-249-441-11	CARBON 100K 5% 1/4W	
R515	1-249-429-11	CARBON 10K 5% 1/4W	
R516	1-249-417-11	CARBON 1K 5% 1/4W F	
R517	1-249-417-11	CARBON 1K 5% 1/4W F	
R518	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R519	1-249-417-11	CARBON 1K 5% 1/4W F	
R520	1-249-429-11	CARBON 10K 5% 1/4W	
R521	1-249-433-11	CARBON 22K 5% 1/4W	
R522	1-249-433-11	CARBON 22K 5% 1/4W	
R523	1-249-433-11	CARBON 22K 5% 1/4W	
R524	1-249-433-11	CARBON 22K 5% 1/4W	
R525	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R526	1-249-433-11	CARBON 22K 5% 1/4W	
R527	1-249-433-11	CARBON 22K 5% 1/4W	
R528	1-249-433-11	CARBON 22K 5% 1/4W	
R529	1-249-433-11	CARBON 22K 5% 1/4W	
R530	1-249-433-11	CARBON 22K 5% 1/4W	
R531	1-249-433-11	CARBON 22K 5% 1/4W	
R532	1-249-433-11	CARBON 22K 5% 1/4W	
R533	1-249-433-11	CARBON 22K 5% 1/4W	
R534	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R535	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R536	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R537	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R538	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R539	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R542	1-249-441-11	CARBON 100K 5% 1/4W	
R543	1-249-441-11	CARBON 100K 5% 1/4W	
R544	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R545	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R548	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R549	1-249-425-11	CARBON 4.7K 5% 1/4W F	

CD MAIN | CD PANEL

Ref. No.	Part No.	Description			Remark
R550	1-249-413-11	CARBON	470	5% 1/4W	F
R551	1-249-441-11	CARBON	100K	5% 1/4W	
R552	1-249-441-11	CARBON	100K	5% 1/4W	
R553	1-249-441-11	CARBON	100K	5% 1/4W	
R600	1-249-409-11	CARBON	220	5% 1/4W	F
R601	1-249-409-11	CARBON	220	5% 1/4W	F
R602	1-249-433-11	CARBON	22K	5% 1/4W	
R603	1-249-433-11	CARBON	22K	5% 1/4W	
R604	1-249-433-11	CARBON	22K	5% 1/4W	
R609	1-249-435-11	CARBON	33K	5% 1/4W	
R610	1-249-438-11	CARBON	56K	5% 1/4W	
R611	1-249-429-11	CARBON	10K	5% 1/4W	
R612	1-249-429-11	CARBON	10K	5% 1/4W	
R613	1-249-417-11	CARBON	1K	5% 1/4W	F
R614	1-249-429-11	CARBON	10K	5% 1/4W	
R615	1-249-433-11	CARBON	22K	5% 1/4W	
R616	1-249-393-11	CARBON	10	5% 1/4W	F
R617	1-249-413-11	CARBON	470	5% 1/4W	F
R801	1-249-405-11	CARBON	100	5% 1/4W	F
		< TRANSFORMER >			
⚠T500	1-423-426-11	TRANSFORMER, POWER			
		< VIBRATOR >			
X501	1-579-833-21	VIBRATOR, CRYSTAL 33MHz			
**********					
*	A-4356-653-A	CD PANEL BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)			
		**********			
*	A-4356-662-A	CD PANEL BOARD, COMPLETE (D209:UK, G/D309:UK, G)			
		**********			
*	4-955-816-01	HOLDER (1F), FL TUBE			
		< CAPACITOR >			
C702	1-161-494-00	CERAMIC	0.022uF		25V
C703	1-161-494-00	CERAMIC	0.022uF		25V
C704	1-161-494-00	CERAMIC	0.022uF		25V
C705	1-164-159-11	CERAMIC	0.1uF		50V
C706	1-124-126-00	ELECT	47uF	20%	10V
		< CONNECTOR >			
* CN701	1-568-842-11	SOCKET, CONNECTOR 27P			
		< COMPOSITION CIRCUIT BLOCK >			
CP701	1-239-612-11	COMPOSITION CIRCUIT BLOCK			
CP702	1-239-613-11	COMPOSITION CIRCUIT BLOCK			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D701	8-719-987-63	DIODE 1N4148M			
D702	8-719-987-63	DIODE 1N4148M			
D703	8-719-987-63	DIODE 1N4148M			
D704	8-719-987-63	DIODE 1N4148M			
D705	8-719-987-63	DIODE 1N4148M			
D706	8-719-987-63	DIODE 1N4148M			
D707	8-719-987-63	DIODE 1N4148M			
D708	8-719-987-63	DIODE 1N4148M			
D709	8-719-987-63	DIODE 1N4148M			
D710	8-719-987-63	DIODE 1N4148M			
D711	8-719-987-63	DIODE 1N4148M			
D712	8-719-001-21	DIODE UZL-9H1			
		< FLUORESCENT INDICATOR >			
FLD701	1-519-681-21	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	8-759-156-33	IC uPD75216ACW-W32			
		< RESISTOR >			
R701	1-249-435-11	CARBON	33K	5% 1/4W	
R702	1-249-435-11	CARBON	33K	5% 1/4W	
R703	1-249-435-11	CARBON	33K	5% 1/4W	
R704	1-249-435-11	CARBON	33K	5% 1/4W	
R705	1-249-435-11	CARBON	33K	5% 1/4W	
R706	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R707	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R708	1-249-439-11	CARBON	68K	5% 1/4W	
		< SWITCH >			
S701	1-554-303-21	SWITCH, TACTILE (PROGRAM)			
S702	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S703	1-554-303-21	SWITCH, TACTILE (PAUSE)			
S704	1-554-303-21	SWITCH, TACTILE (▶▶)			
S705	1-554-303-21	SWITCH, TACTILE (CONTINUE)			
S706	1-554-303-21	SWITCH, TACTILE (FADER)			
S707	1-554-303-21	SWITCH, TACTILE (PLAY)			
S708	1-554-303-21	SWITCH, TACTILE (AMS ⏮)			
S709	1-554-303-21	SWITCH, TACTILE (SHUFFLE)			
S710	1-554-303-21	SWITCH, TACTILE (TIME)			
S711	1-554-303-21	SWITCH, TACTILE (◀◀)			
S712	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)			
S713	1-554-303-21	SWITCH, TACTILE (STOP)			
S714	1-554-303-21	SWITCH, TACTILE (AMS ⏭)			
S715	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CD PANEL | LEAF SW-A | LEAF SW-B | LOADING | TC MAIN

Ref. No.	Part No.	Description	Remark
S716	1-554-303-21	SWITCH, TACTILE (TIME SET)	
S718	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S719	1-554-303-21	SWITCH, TACTILE (1)	
S720	1-554-303-21	SWITCH, TACTILE (6)	
S721	1-554-303-21	SWITCH, TACTILE (11)	
S723	1-554-303-21	SWITCH, TACTILE (2)	
S724	1-554-303-21	SWITCH, TACTILE (7)	
S725	1-554-303-21	SWITCH, TACTILE (12)	
S727	1-554-303-21	SWITCH, TACTILE (3)	
S728	1-554-303-21	SWITCH, TACTILE (8)	
S731	1-554-303-21	SWITCH, TACTILE (4)	
S732	1-554-303-21	SWITCH, TACTILE (9)	
S734	1-554-303-21	SWITCH, TACTILE (5)	
S736	1-554-303-21	SWITCH, TACTILE (10)	
S739	1-554-303-21	SWITCH, TACTILE (>12)	
S740	1-554-303-21	SWITCH, TACTILE (CHECK)	
S741	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S742	1-554-303-21	SWITCH, TACTILE (A. SPACE/A. CUE)	
		< VIBRATOR >	
X701	1-577-082-11	VIBRATOR, CERAMIC 4MHz	
**********			
*	1-638-020-11	LEAF SW-A BOARD	
		**********	
		< CONNECTOR >	
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
		< IC >	
IC81	8-719-710-03	DIODE NJL5165K-B	
		< RESISTOR >	
R84	1-249-417-11	CARBON 1K 5% 1/4W F	
R85	1-249-408-11	CARBON 180 5% 1/4W F	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (TYPE II DET)	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	
**********			
*	1-638-020-11	LEAF SW-B BOARD	
		**********	
	8-719-710-03	DIODE NJL5165K-B	
		< CONNECTOR >	
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W F	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W F	
R85	1-249-408-11	CARBON 180 5% 1/4W F	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (TYPE II DET)	
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF)	
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF)	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	
**********			
*	1-632-202-11	LOADING BOARD	
		**********	
		< CONNECTOR >	
* CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
		< MOTOR >	
M201	X-4604-363-A	MOTOR (L) ASSY	
		< SWITCH >	
S271	1-572-086-11	SWITCH, LEAF	
S272	1-572-086-11	SWITCH, LEAF	
**********			
*	A-4356-643-A	TC MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
		**********	
*	A-4356-654-A	TC MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	
		**********	
*	4-942-204-01	PLATE, GROUND	
		< CAPACITOR >	
C122	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C123	1-162-291-31	CERAMIC 560PF 10% 50V	
C126	1-136-165-00	FILM 0.1uF 5% 50V	
C127	1-126-791-11	ELECT 10uF 20% 35V	
C128	1-126-301-11	ELECT 1uF 20% 50V	
C129	1-124-465-00	ELECT 0.47uF 20% 50V	
C130	1-126-791-11	ELECT 10uF 20% 35V	
C131	1-164-159-11	CERAMIC 0.1uF 50V	
C132	1-126-791-11	ELECT 10uF 20% 35V	
C141	1-126-301-11	ELECT 1uF 20% 50V	
C142	1-126-791-11	ELECT 10uF 20% 35V	
C143	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C222	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C223	1-162-291-31	CERAMIC 560PF 10% 50V	
C226	1-136-165-00	FILM 0.1uF 5% 50V	

TC MAIN

Ref. No.	Part No.	Description			Remark
C227	1-126-791-11	ELECT	10uF	20%	35V
C228	1-126-301-11	ELECT	1uF	20%	50V
C229	1-124-465-00	ELECT	0.47uF	20%	50V
C230	1-126-791-11	ELECT	10uF	20%	35V
C231	1-161-377-00	CERAMIC	0.0047uF	20%	16V
C232	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C233	1-124-465-00	ELECT	0.47uF	20%	50V
C241	1-126-301-11	ELECT	1uF	20%	50V
C242	1-126-791-11	ELECT	10uF	20%	35V
C243	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C301	1-126-791-11	ELECT	10uF	20%	35V
C302	1-126-926-11	ELECT	1000uF	20%	10V
C303	1-123-382-00	ELECT	3.3uF	20%	100V
C304	1-164-159-11	CERAMIC	0.1uF		50V
C305	1-164-159-11	CERAMIC	0.1uF		50V
C306	1-126-933-11	ELECT	100uF	20%	16V
C307	1-126-933-11	ELECT	100uF	20%	16V
C308	1-126-926-11	ELECT	1000uF	20%	10V
C309	1-126-926-11	ELECT	1000uF	20%	10V
C310	1-126-791-11	ELECT	10uF	20%	35V
C311	1-126-791-11	ELECT	10uF	20%	35V
C312	1-126-949-11	ELECT	220uF	20%	35V
C314	1-124-584-00	ELECT	100uF	20%	10V
C315	1-126-926-11	ELECT	1000uF	20%	10V
C316	1-126-933-11	ELECT	100uF	20%	16V
C317	1-126-933-11	ELECT	100uF	20%	16V
C318	1-126-933-11	ELECT	100uF	20%	16V
C456	1-162-290-31	CERAMIC	470PF	10%	50V
C457	1-162-290-31	CERAMIC	470PF	10%	50V
C458	1-164-159-11	CERAMIC	0.1uF		50V
C459	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

* CN101	1-564-523-11	PLUG, CONNECTOR 8P	
* CN301	1-564-519-11	PLUG, CONNECTOR 4P	
* CN302	1-564-506-11	PLUG, CONNECTOR 3P	
* CN303	1-564-506-11	PLUG, CONNECTOR 3P	
* CN401	1-564-517-11	PLUG, CONNECTOR 2P	
CN402	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN403	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN404	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN405	1-568-437-11	SOCKET, CONNECTOR 7P	
CN406	1-568-437-11	SOCKET, CONNECTOR 7P	
CN407	1-568-441-11	SOCKET, CONNECTOR 9P	
CN408	1-568-444-11	SOCKET, CONNECTOR 13P	

< DIODE >

			Remark
D301	8-719-000-78	DIODE UZL-7L2	
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-987-63	DIODE 1N4148M	
D305	8-719-200-82	DIODE 11ES2	
D306	8-719-200-82	DIODE 11ES2	
D401	8-719-987-63	DIODE 1N4148M	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-987-63	DIODE 1N4148M	

< IC >

			Remark
IC101	8-759-098-75	IC HA12171NT	
IC301	8-759-071-48	IC M5F7807L	
IC401	8-759-076-36	IC M50964-SOX-1044	
IC402	8-759-635-63	IC M51943BSL	
IC403	8-759-207-05	IC TA7272P	

< TRANSISTOR >

			Remark
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q400	8-729-900-65	TRANSISTOR DTA144ES	
Q401	8-729-900-65	TRANSISTOR DTA144ES	
Q402	8-729-900-65	TRANSISTOR DTA144ES	
Q403	8-729-900-65	TRANSISTOR DTA144ES	
Q404	8-729-900-65	TRANSISTOR DTA144ES	
Q405	8-729-900-65	TRANSISTOR DTA144ES	
Q406	8-729-900-89	TRANSISTOR DTC144ES	
Q407	8-729-900-89	TRANSISTOR DTC144ES	
Q408	8-729-900-65	TRANSISTOR DTA144ES	
Q409	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q410	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q411	8-729-801-84	TRANSISTOR 2SB1013-4	
Q412	8-729-801-84	TRANSISTOR 2SB1013-4	
Q413	8-729-900-65	TRANSISTOR DTA144ES	
Q414	8-729-900-89	TRANSISTOR DTC144ES	

< RESISTOR >

R120	1-215-451-00	METAL	18K	1%	1/6W
R121	1-249-430-11	CARBON	12K	5%	1/4W
R122	1-249-431-11	CARBON	15K	5%	1/4W
R123	1-249-425-11	CARBON	4.7K	5%	1/4W F
R124	1-249-428-11	CARBON	8.2K	5%	1/4W F
R125	1-249-429-11	CARBON	10K	5%	1/4W
R127	1-249-429-11	CARBON	10K	5%	1/4W
R130	1-249-429-11	CARBON	10K	5%	1/4W
R131	1-249-425-11	CARBON	4.7K	5%	1/4W F
R132	1-249-429-11	CARBON	10K	5%	1/4W
R133	1-249-429-11	CARBON	10K	5%	1/4W
R135	1-247-864-11	CARBON	24K	5%	1/4W

Ref. No.	Part No.	Description				Remark
R136	1-249-429-11	CARBON	10K	5%	1/4W	
R137	1-249-429-11	CARBON	10K	5%	1/4W	
R138	1-249-429-11	CARBON	10K	5%	1/4W	
R141	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R142	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R143	1-247-840-00	CARBON	2.4K	5%	1/4W	
R144	1-249-433-11	CARBON	22K	5%	1/4W	
R145	1-249-417-11	CARBON	1K	5%	1/4W	F
R221	1-249-430-11	CARBON	12K	5%	1/4W	
R222	1-249-431-11	CARBON	15K	5%	1/4W	
R223	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R224	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R225	1-247-882-11	CARBON	130K	5%	1/4W	
R226	1-247-866-11	CARBON	30K	5%	1/4W	
R229	1-249-429-11	CARBON	10K	5%	1/4W	
R230	1-249-432-11	CARBON	18K	5%	1/4W	
R231	1-247-885-00	CARBON	180K	5%	1/4W	
R241	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R242	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R243	1-247-840-00	CARBON	2.4K	5%	1/4W	
R244	1-249-433-11	CARBON	22K	5%	1/4W	
R245	1-249-417-11	CARBON	1K	5%	1/4W	F
R300	1-249-405-11	CARBON	100	5%	1/4W	F
R301	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R302	1-249-405-11	CARBON	100	5%	1/4W	F
R303	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R352	1-249-393-11	CARBON	10	5%	1/4W	F
R400	1-249-389-11	CARBON	4.7	5%	1/4W	F
R401	1-249-429-11	CARBON	10K	5%	1/4W	
R402	1-247-903-00	CARBON	1M	5%	1/4W	
R403	1-247-895-00	CARBON	470K	5%	1/4W	
R404	1-247-895-00	CARBON	470K	5%	1/4W	
R405	1-249-408-11	CARBON	180	5%	1/4W	F
R406	1-249-408-11	CARBON	180	5%	1/4W	F
R407	1-249-410-11	CARBON	270	5%	1/4W	F
R408	1-247-812-11	CARBON	160	5%	1/4W	
R409	1-247-812-11	CARBON	160	5%	1/4W	
R410	1-247-816-11	CARBON	240	5%	1/4W	
R411	1-247-812-11	CARBON	160	5%	1/4W	
R412	1-249-411-11	CARBON	330	5%	1/4W	
R413	1-249-429-11	CARBON	10K	5%	1/4W	
R414	1-249-429-11	CARBON	10K	5%	1/4W	
R415	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R416	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R417	1-249-437-11	CARBON	47K	5%	1/4W	
R418	1-249-429-11	CARBON	10K	5%	1/4W	
R420	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R422	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R423	1-249-429-11	CARBON	10K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R425	1-249-417-11	CARBON	1K	5%	1/4W	F
R426	1-249-417-11	CARBON	1K	5%	1/4W	F
R427	1-249-417-11	CARBON	1K	5%	1/4W	F
R431	1-249-429-11	CARBON	10K	5%	1/4W	
R432	1-249-415-11	CARBON	680	5%	1/4W	F
R433	1-249-429-11	CARBON	10K	5%	1/4W	
R434	1-249-415-11	CARBON	680	5%	1/4W	F
R435	1-249-429-11	CARBON	10K	5%	1/4W	
R451	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R452	1-249-435-11	CARBON	33K	5%	1/4W	
R453	1-249-437-11	CARBON	47K	5%	1/4W	
R454	1-247-872-11	CARBON	51K	5%	1/4W	
R455	1-247-862-11	CARBON	20K	5%	1/4W	
R456	1-247-866-11	CARBON	30K	5%	1/4W	
R457	1-247-872-11	CARBON	51K	5%	1/4W	
R458	1-249-405-11	CARBON	100	5%	1/4W	F
R459	1-249-381-11	CARBON	1	5%	1/4W	F
R460	1-249-381-11	CARBON	1	5%	1/4W	F
R461	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R462	1-249-435-11	CARBON	33K	5%	1/4W	
R463	1-249-437-11	CARBON	47K	5%	1/4W	
R464	1-247-872-11	CARBON	51K	5%	1/4W	
R465	1-247-862-11	CARBON	20K	5%	1/4W	
R466	1-247-866-11	CARBON	30K	5%	1/4W	
R467	1-247-872-11	CARBON	51K	5%	1/4W	
R468	1-249-405-11	CARBON	100	5%	1/4W	F
R469	1-249-381-11	CARBON	1	5%	1/4W	F
R470	1-249-381-11	CARBON	1	5%	1/4W	F
R471	1-249-429-11	CARBON	10K	5%	1/4W	
R472	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R473	1-249-434-11	CARBON	27K	5%	1/4W	
R474	1-249-429-11	CARBON	10K	5%	1/4W	
R476	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R477	1-249-434-11	CARBON	27K	5%	1/4W	

< VARIABLE RESISTOR >

RV101	1-230-496-11	RES, ADJ, CARBON 10K
RV201	1-230-496-11	RES, ADJ, CARBON 10K

< VIBRATOR >

X401	1-577-358-21	VIBRATOR, CERAMIC

****

* 1-646-887-11 TC PANEL (A) BOARD

****

< CONNECTOR >

CN451	1-568-442-11	SOCKET, CONNECTOR 9P

TC PANEL (A) TC PANEL (B)

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D481	8-719-313-65	DIODE SEL2410E-TH10				
D482	8-719-301-49	LED SEL2810A				
D483	8-719-301-49	LED SEL2810A				
		< RESISTOR >				
R481	1-249-407-11	CARBON	150	5%	1/4W	F
R482	1-249-409-11	CARBON	220	5%	1/4W	F
R483	1-249-415-11	CARBON	680	5%	1/4W	F
R484	1-249-417-11	CARBON	1K	5%	1/4W	F
R485	1-249-426-11	CARBON	5.6K	5%	1/4W	
R486	1-249-430-11	CARBON	12K	5%	1/4W	
		< SWITCH >				
S401	1-554-303-21	SWITCH, TACTILE (STOP)				
S402	1-554-303-21	SWITCH, TACTILE (▶)				
S403	1-554-303-21	SWITCH, TACTILE (◀)				
S404	1-554-303-21	SWITCH, TACTILE (◀◀)				
S405	1-554-303-21	SWITCH, TACTILE (▶▶)				
S406	1-572-269-11	SWITCH, SLIDE (DOLBY NR)				
S407	1-572-268-11	SWITCH, SLIDE (DIRECTION MODE)				
**********						
*	1-646-888-11	TC PANEL (B) BOARD				
		**********				
		< CONNECTOR >				
CN452	1-568-443-11	SOCKET, CONNECTOR 13P				
		< DIODE >				
D491	8-719-301-37	LED SEL2210S-CD				
D492	8-719-301-49	LED SEL2810A				
D493	8-719-313-65	DIODE SEL2410E-TH10				
D494	8-719-301-49	LED SEL2810A				
D495	8-719-301-49	LED SEL2810A				
D496	8-719-301-37	LED SEL2210S-CD (D309)				
D497	8-719-301-37	LED SEL2210S-CD				
D498	8-719-301-37	LED SEL2210S-CD				
		< RESISTOR >				
R490	1-249-407-11	CARBON	150	5%	1/4W	F
R491	1-249-409-11	CARBON	220	5%	1/4W	F
R492	1-249-411-11	CARBON	330	5%	1/4W	
R493	1-249-413-11	CARBON	470	5%	1/4W	F
R494	1-249-411-11	CARBON	330	5%	1/4W	
R495	1-249-413-11	CARBON	470	5%	1/4W	F
R496	1-249-415-11	CARBON	680	5%	1/4W	F
R497	1-249-417-11	CARBON	1K	5%	1/4W	F
R498	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R499	1-249-424-11	CARBON	3.9K	5%	1/4W	F
		< SWITCH >				
S451	1-554-303-21	SWITCH, TACTILE (STOP)				
S452	1-554-303-21	SWITCH, TACTILE (PAUSE)				
S453	1-554-303-21	SWITCH, TACTILE (▶)				
S454	1-554-303-21	SWITCH, TACTILE (◀)				
S455	1-554-303-21	SWITCH, TACTILE (REC MUTE)				
S456	1-554-303-21	SWITCH, TACTILE (◀◀)				
S457	1-554-303-21	SWITCH, TACTILE (▶▶)				
S458	1-554-303-21	SWITCH, TACTILE (REC)				
S459	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED HIGH)				
S460	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED NORMAL)				
S461	1-554-303-21	SWITCH, TACTILE (D309) (CD SYNCHRO)				
**********						
		MISCELLANEOUS				
		**********				
	1-575-001-11	WIRE, FLAT TYPE (12 CORE)				
	1-638-983-11	PC BOARD, MOTOR FLEXIBLE				
	1-696-634-21	WIRE (FLAT TYPE) (22 CORE)				
⚠	8-848-144-11	DEVICE, OPTICAL KSS-240A				
56	1-751-209-11	WIRE (FLAT TYPE) (9 CORE)				
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)				
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)				
69	1-690-729-11	WIRE, FLAT TYPE (27 CORE)				
71	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D309:AUS)				
71	1-751-210-11	WIRE (FLAT TYPE) (13 CORE) (D209/D309: AEP, UK, E, G, IT, EE, EA, MY, SP, CIS)				
* 161	1-452-538-11	MAGNET				
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)				
HRPE901	A-2004-190-A	DECK ASSY, HEAD (DECK B)				
IC302	8-759-604-95	IC M5F79M07				
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)				
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)				
M902	X-3363-501-1	MOTOR ASSY (REEL)				
Q302	8-729-209-15	TRANSISTOR 2SD2012				
**********						
		ACCESSORIES & PACKING MATERIALS				
		**********				
* 10	3-703-713-41	STICKER, SONY SYMBOL (10) (D209:AUS/D309:UK, AUS)				
* 5	4-941-548-01	LABEL, CLASS 1				
*	4-957-503-01	INDIVIDUAL CARTON (D209:AEP, IT)				
*	4-958-606-01	CUSHION (D209:AEP, IT)				
**********						

Ref. No.	Part No.	Description	Remark

****
HARDWARE LIST
****

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-621-775-10	SCREW +B 2.6X4	
#6	7-621-255-15	SCREW +P 2X3	
#7	7-621-775-00	SCREW +B 2.6X3	
#8	7-627-556-08	SCREW +P 2.6X2.8	

9-957-731-11

Sony Corporation
Audio Group

English
93B0574-1
Printed in Japan
© 1993. 2
Published by Audio Corporate Planning Group

STR-A37/D309/D359

SERVICE MANUAL

AEP Model
STR-D309/D359
UK Model
STR-D359
Australian Model
E Model
PX Model
STR-A37

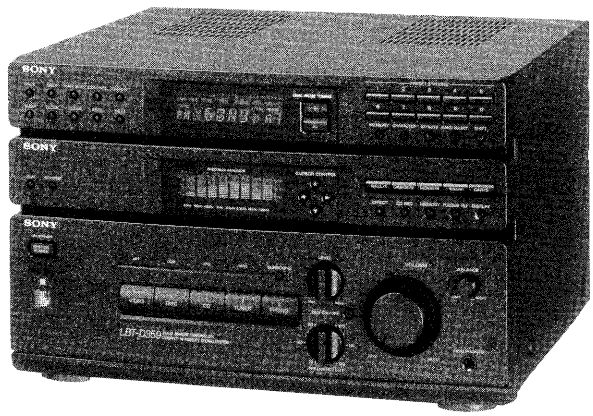


Photo is STR-D359

This set is the tuner and amplifier section in
STR-A37 : LBT-A37CDM
STR-D309 : LBT-D309CD
STR-D359 : LBT-D359CD

SPECIFICATIONS

• STR-A37

Tuner

System: FM stereo; FM/AM superheterodyne tuner

FM tuner section
- Tuning range: 87.5 to 108 MHz
- Antenna: 75 ohms unbalanced; 300 ohms balanced
- Intermediate frequency: 10.7 MHz

AM tuner section
- Tuning range: 531 to 1,602 kHz (at 9 kHz step); 530 to 1,710 kHz (at 10 kHz step)
- Antenna: AM loop antenna; External antenna terminal
- Intermediate frequency: 450 kHz

Amplifier

Peak music power output: 700 W (6 ohms, 4 speakers driven)

Continuous RMS power output: 55 W + 55 W (6 ohms, at 1 kHz, 5% THD)

Input	Jack type	Sensitivity	Impedance
VIDEO IN	Phono	300 mV	47 kohms
PHONO IN	Phono	3 mV	47 kohms
MIC	Phone	1 mV	10 kilohms

Output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 8 – 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response: VIDEO: 15 Hz to 50 kHz $^{+0}_{-3}$ dB

General

Power requirements: 110 – 120 V/220 – 240 V AC, adjustable with the VOLTAGE SELECTOR, 50/60 Hz

Power consumption: 155 W

Mass: Approx. 7.3 kg

Dimensions: Approx. 355 × 225 × 330 mm (w/h/d, including projections)

• STR-D309/D359

Tuner

System: FM stereo; FM/AM superheterodyne tuner

FM tuner section: 65.0 to 74.0MHz (East European model)
- Tuning range: 87.5 to 108 MHz
- Antenna: 75 ohms unbalanced
- Intermediate frequency: 10.7 MHz

AM tuner section
- Tuning range: (German model) 531 to 1,602 kHz; (Italian model) 522 to 1,611 kHz; (Other models) MW: 531 to 1,602 kHz, LW: 153 to 279 kHz
- Antenna: AM loop antenna; External antenna terminal
- Intermediate frequency: 450 kHz

— Continued on next page —

使用時は添付資料も参照のこと
Refer to the additional documents

STEREO FM-AM RECEIVER

SONY®

Amplifier

DIN power output 50 W + 50 W (6 ohms, at 1 kHz)
Continuous RMS power output
60 W + 60 W (6 ohms, at 1 kHz, 5% THD)
Music power output 90 W + 90 W (6 ohms)

Input	Jack type	Sensitivity	Impedance
VIDEO IN	Phono	300 mV	47 kohms
PHONO IN	Phono	3 mV	47 kohms

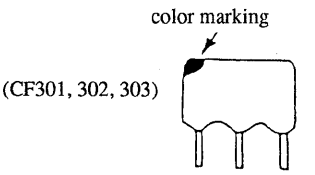
Output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response VIDEO: 15 Hz to 50 kHz $^{+0}_{-3}$ dB

Power requirements 220 – 230 V AC, 50/60 Hz
Power consumption 150 W
Mass Approx. 7.3 kg
Dimensions Approx. 355 × 225 × 330 mm (w/h/d, including projections)

Note on Ceramic Filter (CF301, ▲302, 303) Replacement. (PANEL BOARD : D609, D610)

This set employs two ceramic filters (CF301, ▲302, 303) which should have the same color marking to identify their center frequency. therefore FM IF offset adjustment by (*A, *B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



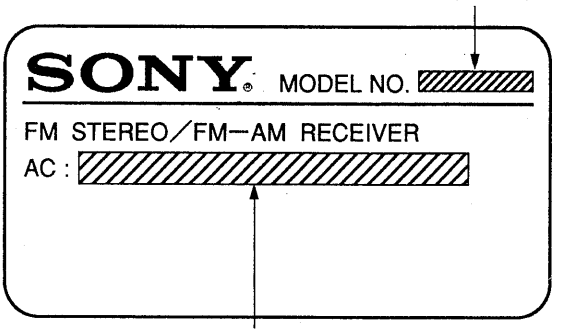
▲CF302 : G, IT model

○:short
X :open

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A (D610)	*B (D609)	
White	10.750	X	○	10.750
Red	10.700	X	X	10.700
Black	10.650	○	X	10.650

MODEL IDENTIFICATION

— Model Number Portion — STR-A37, D309, D359



AEP, G, IT, EE, CIS Model: 220-230V~50/60Hz 150W
UK Model: 240V~50Hz
E, AUS, PX Model: 110-120V/220-240V~50/60Hz 155W

Note:
G model : Germany model
IT model : Italian model
EE model : East European model
AUS model : Australian model

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Section Title Page

SECTION 1 GENERAL

Location of Controls 4

SECTION 2. ADJUSTMENTS 5

SECTION 3. DIAGRAMS

3-1. Circuit Boards Location 6
3-2. Block Diagram 7
3-3. Schematic Diagram
• TUNER Section
(STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK) 11
3-4. Printed Wiring Board
• TUNER Section
(STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK) 13
3-5. Schematic Diagram
• TUNER Section (STR-D309 : G, IT) (STR-D359 : IT) 15
3-6. Printed Wiring Board
• TUNER Section (STR-D309 : G, IT) (STR-D359 : IT) 17
3-7. Schematic Diagram
• TUNER Section (STR-A37) 19
3-8. Printed Wiring Board
• TUNER Section (STR-A37) 21
3-9. Printed Wiring Board
• MAIN Section (STR-D309/D359) 23
3-10. Schematic Diagram
• MAIN Section (STR-D309/D359) 27
3-11. Schematic Diagram
•MAIN Section (STR-A37) 32
3-12. Printed Wiring Board
• MAIN Section (STR-A37) 37
3-13. Semiconductor Lead Layouts 41
3-14. IC Block Diagrams 42

SECTION 4. EXPLODED VIEWS

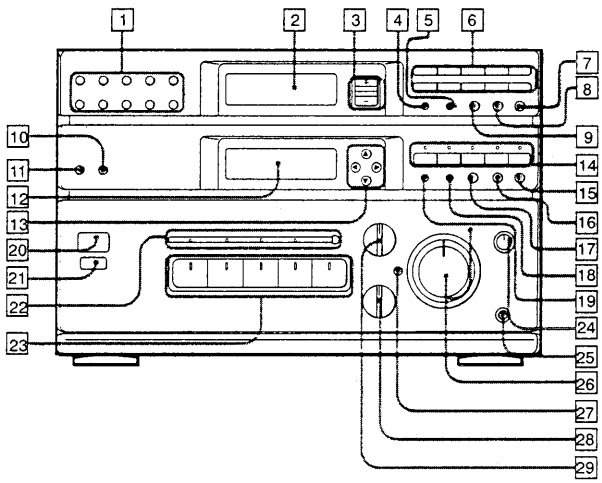
4-1. Chassis Section 44
4-2. Cabinet Section 45

SECTION 5. ELECTRICAL PARTS LIST 47

SECTION 1
GENERAL

LOCATION OF CONTROLS

(STR-D309/D359)



Tuner

1 Buttons for setting the clock and timer
2 Display window
3 DUAL MODE TUNING +/– buttons
4 MEMORY button
5 CHARACTER button
6 Numeric buttons
7 SHIFT button
8 BAND SELECT button
9 ST/MUTE button

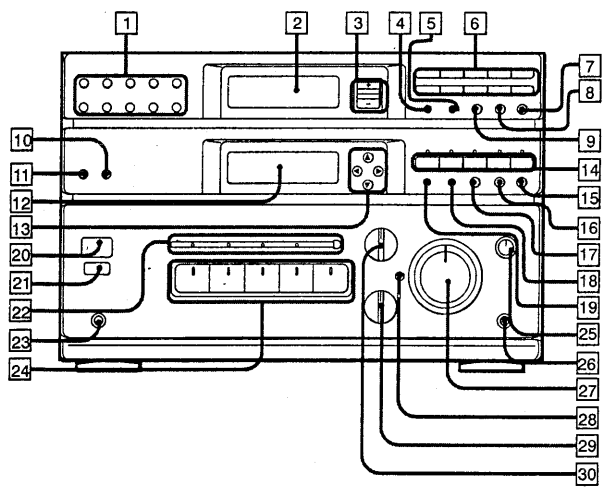
Graphic Equalizer

10 REVERSE button
11 FLAT button
12 Display window
13 CURSOR CONTROL buttons
14 Preset/numeric buttons and indicators
15 DISPLAY button
16 PERSONAL FILE button and indicator
17 MEMORY button and indicator
18 EQ REC (equalizer recording) button and indicator
19 EFFECT button and indicator

Amplifier

20 SYSTEM POWER button
21 Remote control sensor
22 SURROUND button and indicator
23 Function selectors and indicators (VIDEO/TAPE/CD/TUNER/PHONO)
24 BALANCE control
25 HEADPHONES jack
26 VOLUME control and indicator
27 DBS ON/OFF (Dynamic Bass System) button and indicator
28 DBS FREQUENCY control
29 DBS LEVEL control

(STR-A37)



Tuner

1 Buttons for setting the clock and timer
2 Display window
3 DUAL MODE TUNING +/– buttons
4 MEMORY button
5 CHARACTER button
6 Numeric buttons
7 SHIFT button
8 BAND SELECT button
9 ST/MUTE button

Graphic Equalizer

10 REVERSE button
11 FLAT button
12 Display window
13 CURSOR CONTROL buttons
14 Preset/numeric buttons and indicators
15 DISPLAY button
16 PERSONAL FILE button and indicator
17 MEMORY button and indicator
18 EQ REC (equalizer recording) button and indicator
19 EFFECT button and indicator

Amplifier

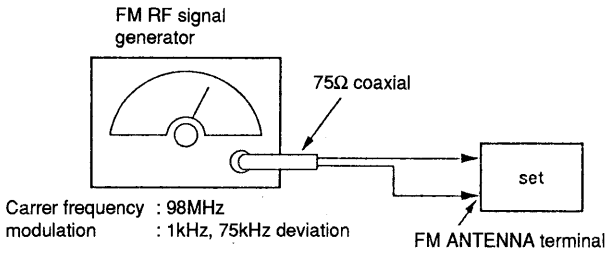
20 SYSTEM POWER button
21 Remote control sensor
22 SURROUND button and indicator
23 MICROPHONE jacks
24 Function selectors and indicators (VIDEO/TAPE/CD/TUNER/PHONO)
25 BALANCE control
26 HEADPHONES jack
27 VOLUME control and indicator
28 DBS ON/OFF (Dynamic Bass System) button and indicator
29 DBS FREQUENCY control
30 DBS LEVEL control

SECTION 2
ADJUSTMENTS

Note: As a front-end (FE301) is difficult to repair if faulty, replace it with new one.

FM SECTION

Setting:



• TUNER OUT CHECK POINT

SPEAKER out receive 98MHz (EXCEPT EE), 70MHz (EE) 60dB μ (1mV) and set the Speaker out to 10dBs by VOLUME.

Speaker load: 6Ω both CH

FM NULL Adjustment

Procedure:

1. Supply a 60dB μ (1mV) 98MHz (EXCEPT EE), 70MHz (EE) signal from the ANTENNA terminal.
2. Tune the set to 98MHz. (EXCEPT EE), 70MHz (EE)
3. Adjust T301 for 0V reading on the measurement point.

FM Tuned Level Adjustment

Band: FM
ST/MUTE SW: OFF

Procedure:

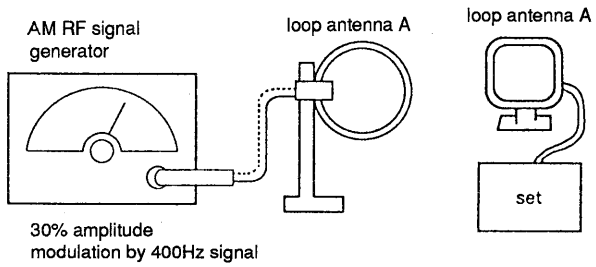
1. Supply a 20±4dBμ (EE), 25±4dBμ (EXCEPT EE) 98MHz (EXCEPT EE), 70MHz (EE) signal from the ANTENNA terminal.
2. Tune the set to 98MHz. (EXCEPT EE), 70MHz (EE)
3. Adjust RV302 so that the Voltage of IC301 ㉒ pin is set to low.

Adjustment Location: ST MAIN BOARD

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

AM SECTION

Setting:



AM Tuned Level Adjustment

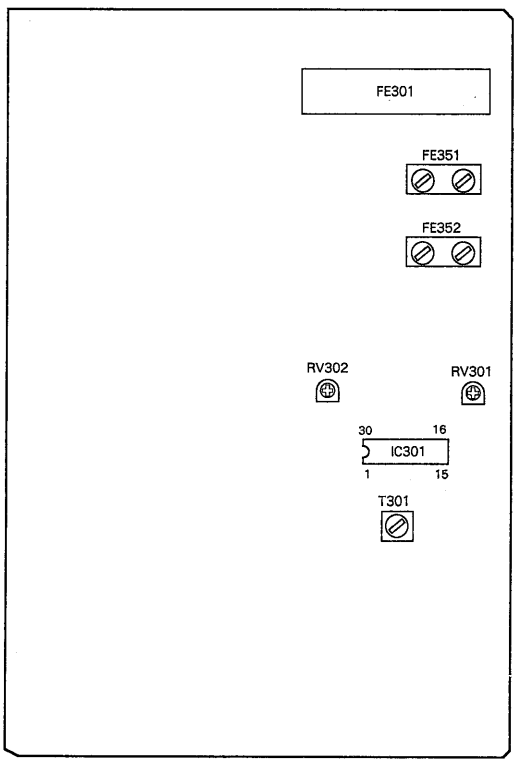
Band: AM

Procedure:

1. Set loop antenna input level to 94dBμ/m, 1050kHz and no signal tuned light should not on.
2. Ture the set to 1050kHz
3. Adjust RV301 so that the Voltage of IC301 ㉑ pin is set to low.

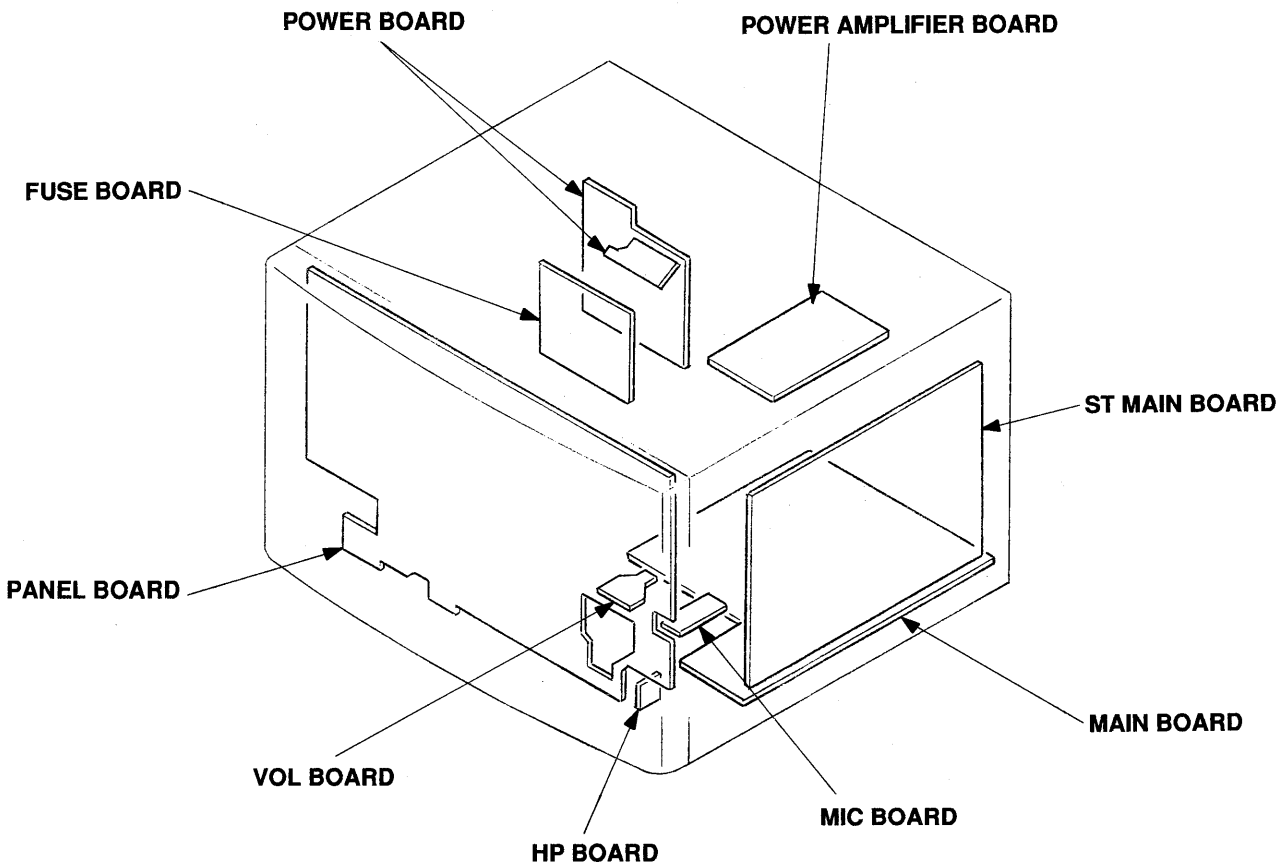
Adjustment Location: tuner board

[ST MAIN BOARD] (component side)

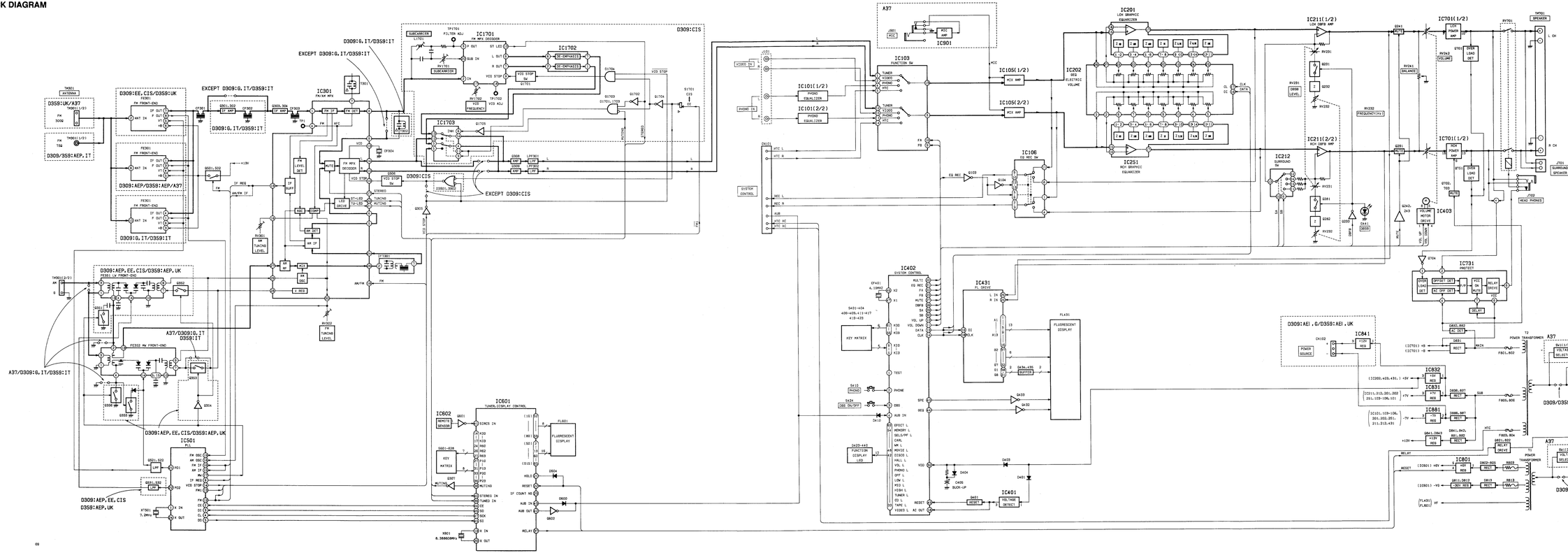


SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

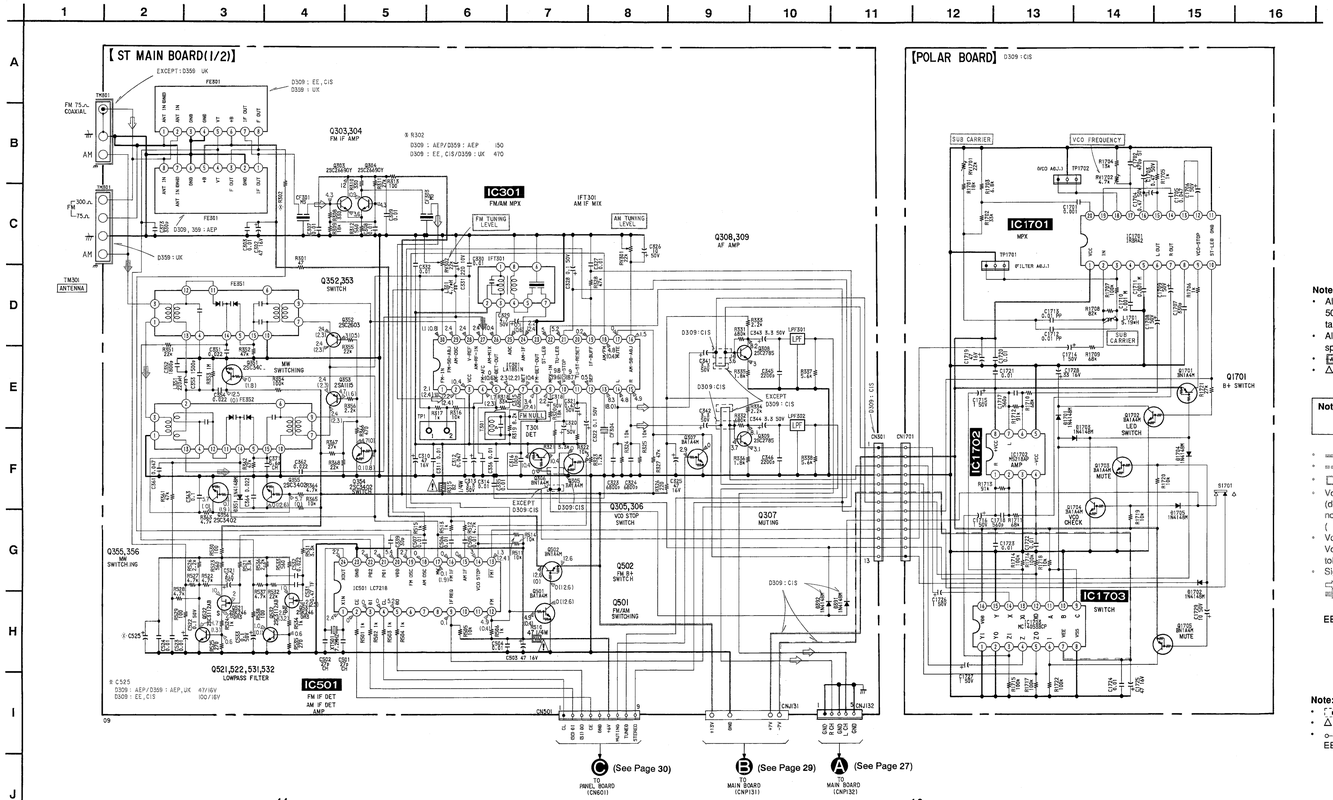


3-2. BLOCK DIAGRAM


D309:CIS
D309:G,IT/D359:IT
EXCEPT D309:G,IT/D359:IT
D309:EE,CIS/D359:UK
D309:G,IT/D359:IT
D309:AEP/D359:AEP,IT
D309:AEP/D359:AEP/A37
D309:G,IT/D359:IT
D309:AEP,EE,CIS/D359:AEP,UK
A37/D309:G,IT D359:IT
D309:AEP,EE,CIS/D359:AEP,UK
D309:AEP,EE,CIS D359:AEP,UK
EXCEPT D309:CIS
A37
D309:AEI,G/D359:AEI,UK
D309/D359
D309/D359
IC1701
IC1702
IC1703
IC301
IC103
IC105(1/2)
IC105(2/2)
IC101(1/2)
IC101(2/2)
IC106
IC201
IC202
IC251
IC211(1/2)
IC211(2/2)
IC212
IC701(1/2)
IC701(1/2)
IC403
IC731
IC402
IC431
IC401
IC501
IC601
IC602
IC841
IC832
IC831
IC881
IC801
FL431
FLUORESCENT DISPLAY
SPEAKER
SURROUND SPEAKER
HEAD PHONES
POWER TRANSFORMER
VOLTAGE SELECTOR
AC IN
PHONO
CD
TUNER
VIDEO
MIC
EQUALIZER
FUNCTION DISPLAY LED
KEY MATRIX
REMOTE SENSOR
VOLUME MOTOR DRIVE
PROTECT
SYSTEM CONTROL
TUNER, DISPLAY CONTROL
PLL
FM MPX DECODER
FM FRONT-END
AM TUNING LEVEL
FM TUNING LEVEL
FM FREQUENCY
VCO ADJ
FILTER ADJ
SUBCARRIER
MUTING
STEREO
TUNED
ST-LED
TU-LED
RELAY
RESET
VOLTAGE DETECT
POWER SOURCE
FUNCTION DISPLAY LED
BUCK-UP
CAOS
BALANCE
BASS
TREBLE
LOUDNESS
FREQUENCY(Hz)
SUBWOOFER
SUBWOOFER LEVEL
SUBWOOFER OUT
SUBWOOFER SW
SUBWOOFER VOLUME
SUBWOOFER LEVEL
SUBWOOFER FREQUENCY
SUBWOOFER PHASE
SUBWOOFER MODE
SUBWOOFER CROSSOVER FREQUENCY
SUBWOOFER SPEAKER
SUBWOOFER SPEAKER LEVEL
SUBWOOFER SPEAKER FREQUENCY
SUBWOOFER SPEAKER PHASE
SUBWOOFER SPEAKER MODE
SUBWOOFER SPEAKER CROSSOVER FREQUENCY
SUBWOOFER SPEAKER OUT
SUBWOOFER SPEAKER SW
SUBWOOFER SPEAKER VOLUME

3-3. SCHEMATIC DIAGRAM

- **TUNER SECTION (STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK)**
- **See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.**



Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- △ : internal component.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- ▭▭▭ : B+ Line
- ▭▭▭ : B– Line
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
- Voltages are taken with a VOM (Input Impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : AM

EE : East European

Note:

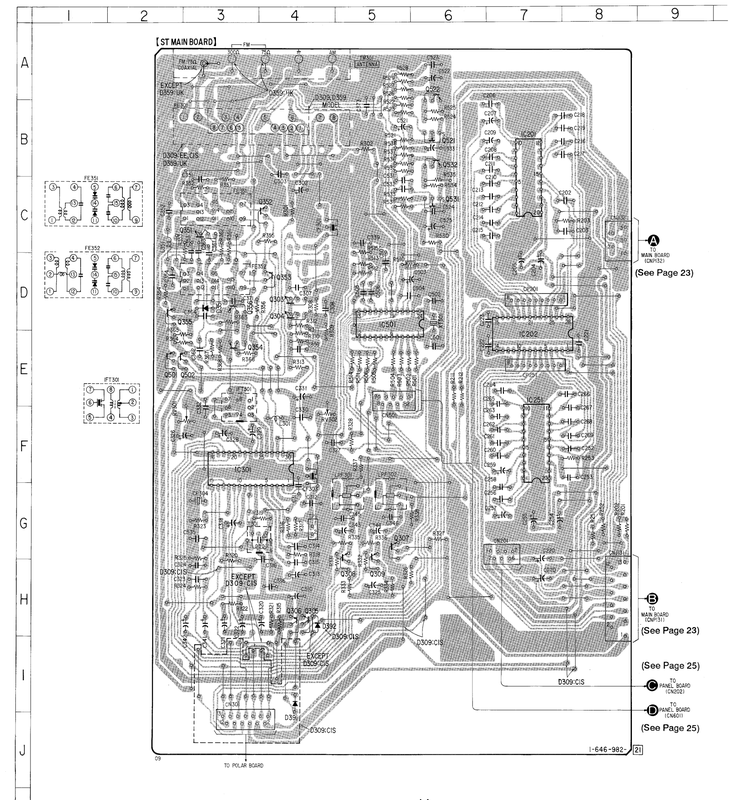
- ⏚ : indicates side identified with part number.
- △ : internal component.
- ○—— : parts extracted from the components side.
- EE : East European

3-4. PRINTED WIRING BOARD

- **TUNER SECTION (STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK)**
- **See page 6 for Circuit Boards Location.**

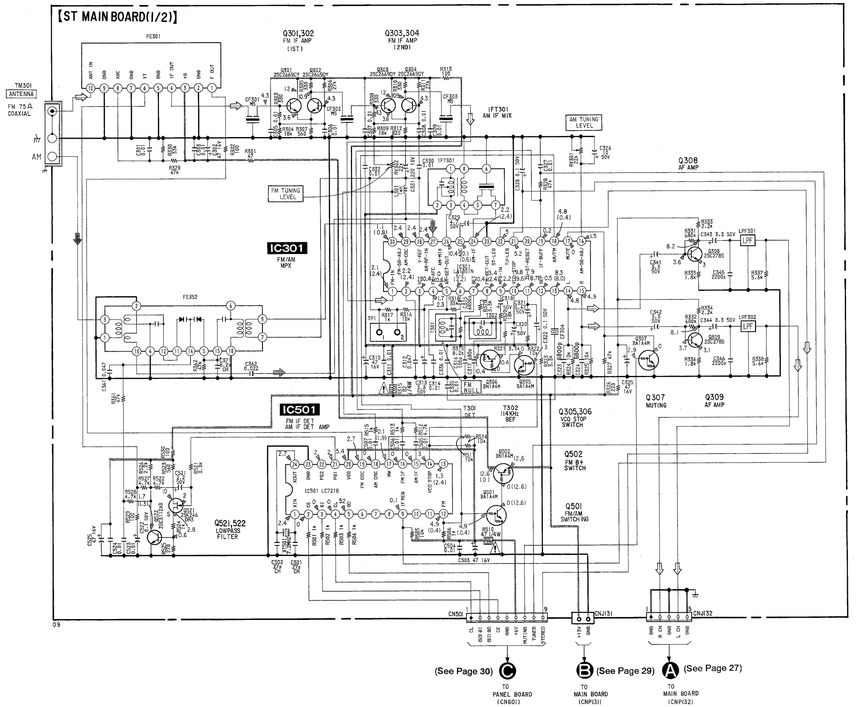
SEMICONDUCTOR LOCATION

Ref. No.	Location
D351	D-3
D391	I-4
D392	H-4
IC201	C-7
IC202	E-7
IC251	F-7
IC301	F-3
IC501	D-5
Q303	D-4
Q304	D-4
Q305	H-4
Q306	H-4
Q307	G-5
Q308	H-5
Q309	H-5
Q351	C-3
Q352	C-4
Q353	D-4
Q354	E-3
Q355	D-2
Q356	D-3
Q501	E-2
Q502	E-3
Q521	B-6
Q522	A-6
Q531	C-6
Q532	B-6



3-5. SCHEMATIC DIAGRAM

- **TUNER SECTION (STR-D309 : G, IT) (STR-D359 : IT)**
- **See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.**



Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- NFR : nonflammable resistor.
- △ : internal component.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

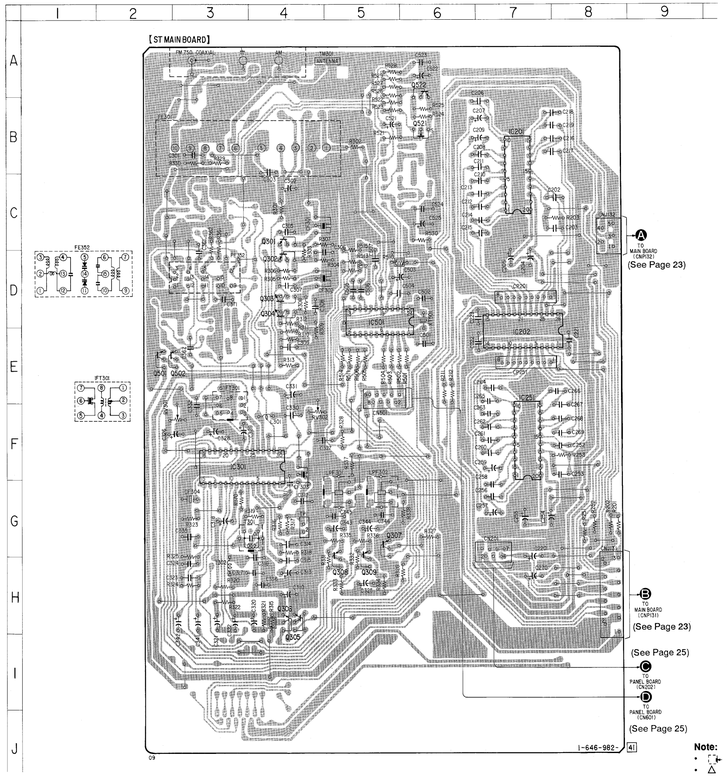
- ▬▬ : B+ Line
- ▬▬ : B− Line
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
- Voltages are taken with a VOM (Input Impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : AM

3-6. PRINTED WIRING BOARD

- **TUNER SECTION (STR-D309 : G, IT) (STR-D359 : IT)**
- **See page 6 for Circuit Boards Location.**

SEMICONDUCTOR LOCATION

Ref. No.	Location
IC201	C-7
IC202	E-7
IC251	F-7
IC301	F-3
IC501	D-5
Q303	D-4
Q304	D-4
Q305	H-4
Q306	H-4
Q307	G-5
Q308	H-5
Q309	H-5
Q501	E-2
Q502	E-3
Q521	B-6
Q522	A-6

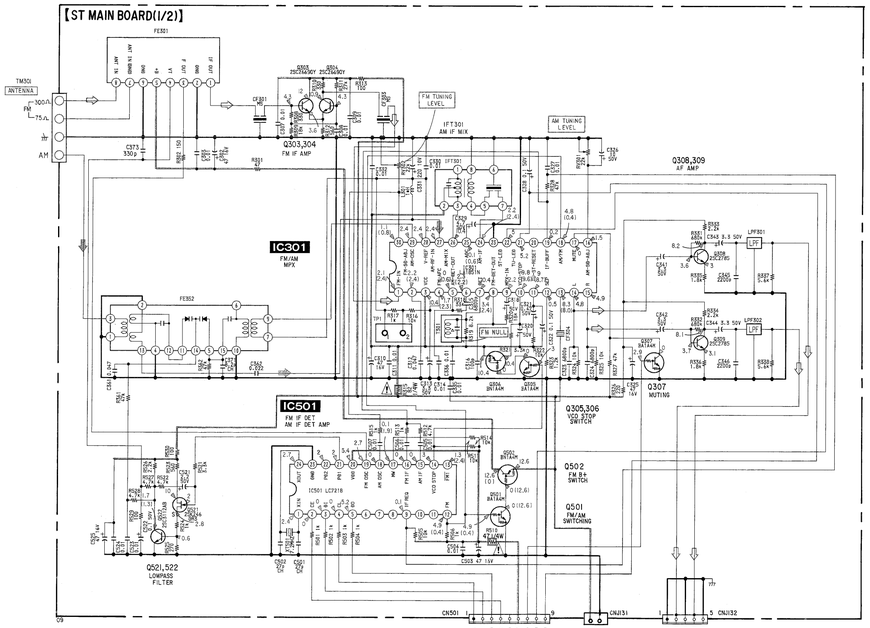


Note:

- : indicates side identified with part number.
- △ : internal component.
- ○— : parts extracted from the components side.

3-7. SCHEMATIC DIAGRAM

- TUNER SECTION (STR-A37)
- See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : nonflammable resistor.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

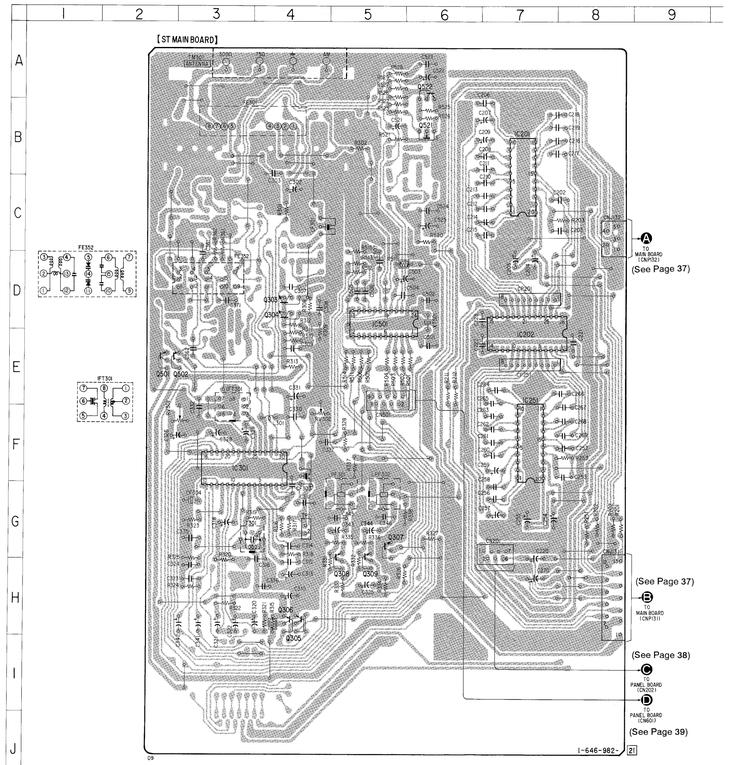
- : B+ Line
- : B– Line
- : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
- Voltages are taken with a VOM (Input Impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : AM

3-8. PRINTED WIRING BOARD

- TUNER SECTION (STR-A37)
- See page 6 for Circuit Boards Location.

SEMICONDUCTOR LOCATION

Ref. No.	Location
IC201	C-7
IC202	E-7
IC251	F-7
IC301	F-3
IC501	D-5
Q303	D-4
Q304	D-4
Q305	H-4
Q306	H-4
Q307	G-5
Q308	H-5
Q309	H-5
Q501	E-2
Q502	E-3
Q521	B-6
Q522	A-6



Note:

- : indicates side identified with part number.
- △ : internal component.
- : parts extracted from the components side.

SEMICONDUCTOR LOCATION

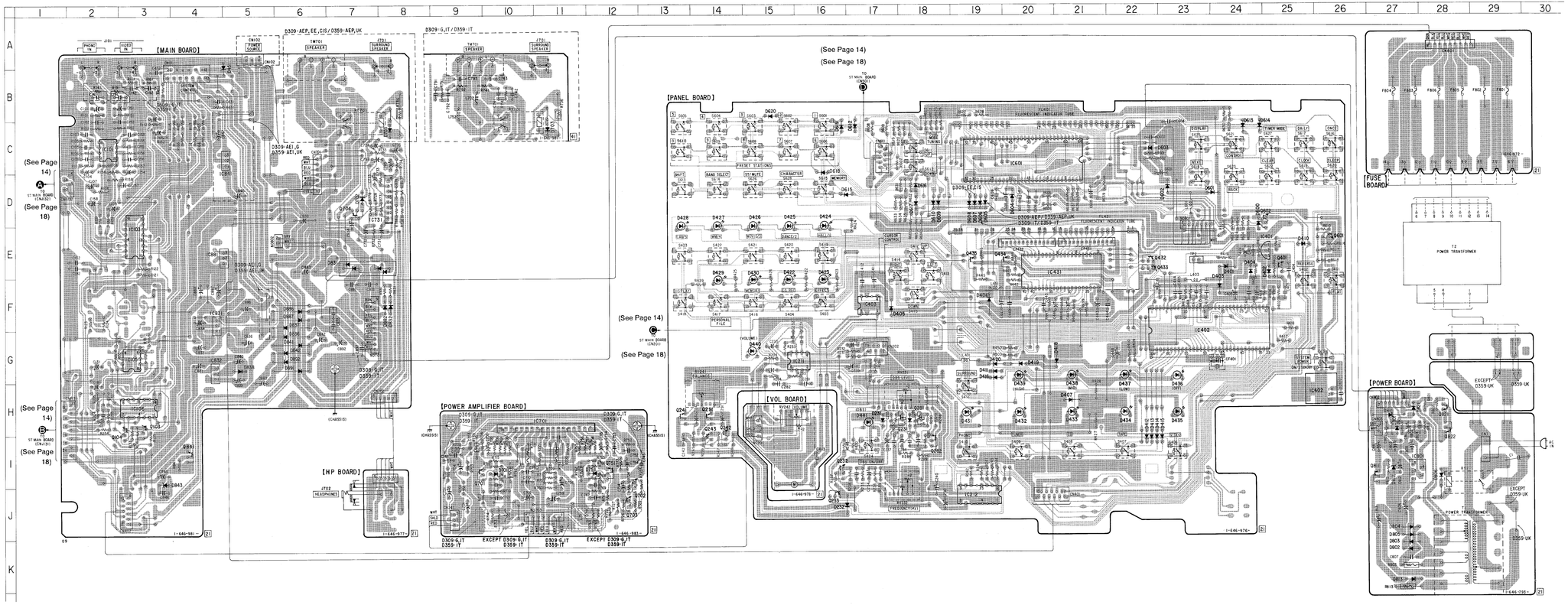
Ref. No.	Location	Ref. No.	Location
D231	H-17	D806	I-28
D232	J-17	D811	H-27
D281	H-18	D812	I-27
D401	E-24	D813	K-27
D402	E-25	D821	H-27
D403	F-24	D831	E-7
D404	E-24	D832	F-8
D405	F-17	D836	G-6
D406	F-19	D837	F-6
D407	H-21	D838	G-5
D410	E-25	D841	G-6
D411	G-19	D842	G-6
D412	I-22	D843	I-3
D413	I-22	D882	F-8
D414	I-22	D886	F-6
D415	I-23	D887	F-6
D416	G-19	D891	G-6
D418	G-21	D892	G-6
D419	G-20		
D420	G-19	IC101	C-2
D422	F-15	IC103	E-3
D423	F-16	IC105	G-3
D424	E-16	IC106	H-3
D425	E-15	IC211	G-16
D426	E-15	IC212	J-19
D427	E-14	IC401	E-25
D428	E-13	IC402	G-23
D429	F-14	IC403	F-17
D430	F-15	IC431	E-21
D431	H-19	IC601	C-20
D432	H-20	IC602	H-26
D433	H-21	IC701	H-11
D434	H-22	IC731	D-8
D435	H-23	IC801	I-27
D436	G-23	IC831	F-4
D437	G-22	IC832	G-4
D438	G-21	IC881	E-4
D439	G-20		
D440	G-15	Q103	H-3
D441	H-17	Q104	H-3
D451	A-5	Q231	H-18
D600	D-24	Q232	I-16
D601	D-24	Q233	J-16
D602	D-23	Q241	H-13
D603	C-22	Q242	I-14
D604	D-20	Q243	I-14
D605	D-19	Q281	H-18
D606	D-19	Q282	I-18
D607	D-19	Q291	H-14
D608	D-19	Q401	E-25
D609	D-18	Q432	E-22
D610	D-18	Q433	E-22
D612	C-17	Q434	E-20
D613	C-24	Q435	E-19
D614	C-24	Q601	E-26
D615	D-17	Q602	D-25
D616	D-18	Q701	I-9
D617	D-18	Q702	I-12
D619	C-16	Q703	J-12
D620	B-15	Q704	D-7
D701	I-10	Q751	I-12
D702	D-7	Q811	I-27
D703	C-8	Q821	H-28
D751	I-12	Q822	H-28
D801	H-27	Q841	I-4
D802	K-27		
D803	K-27		
D804	J-27		
D805	J-27		

Note:

- ⬚ : indicates side identified with part number.
- △ : internal component.
- ○——○ : parts extracted from the components side.
- G : Germany
- IT : Italian
- EE : East European

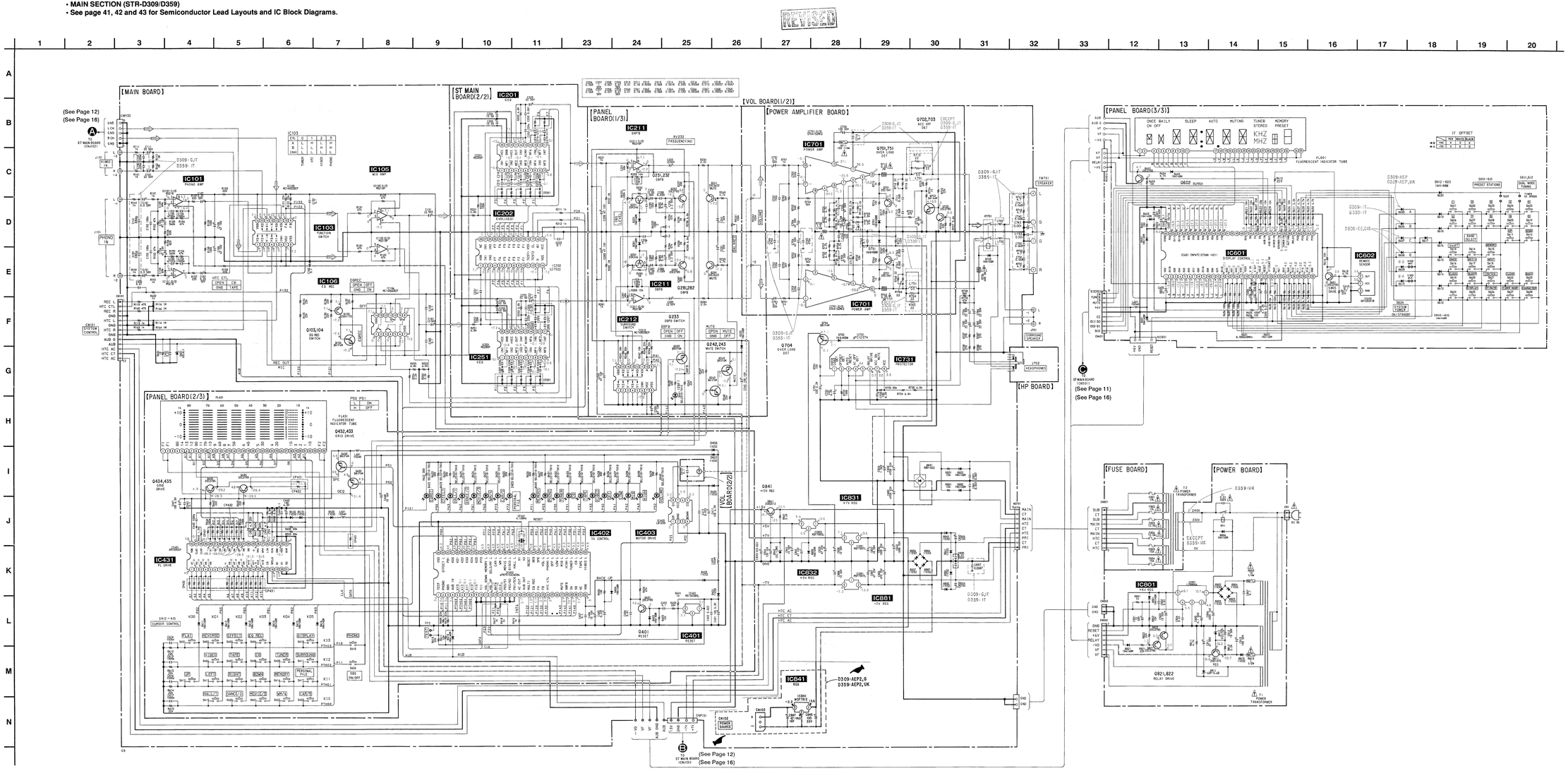
3-9. PRINTED WIRING BOARD

- **MAIN SECTION (STR-D309/D359)**
- **See page 6 for Circuit Boards Location.**



3-10. SCHEMATIC DIAGRAM

- **MAIN SECTION (STR-D309/D359)**
- **See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.**



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- NFR : nonflammable resistor.
- FUSE : fusible resistor.
- △ : internal component.

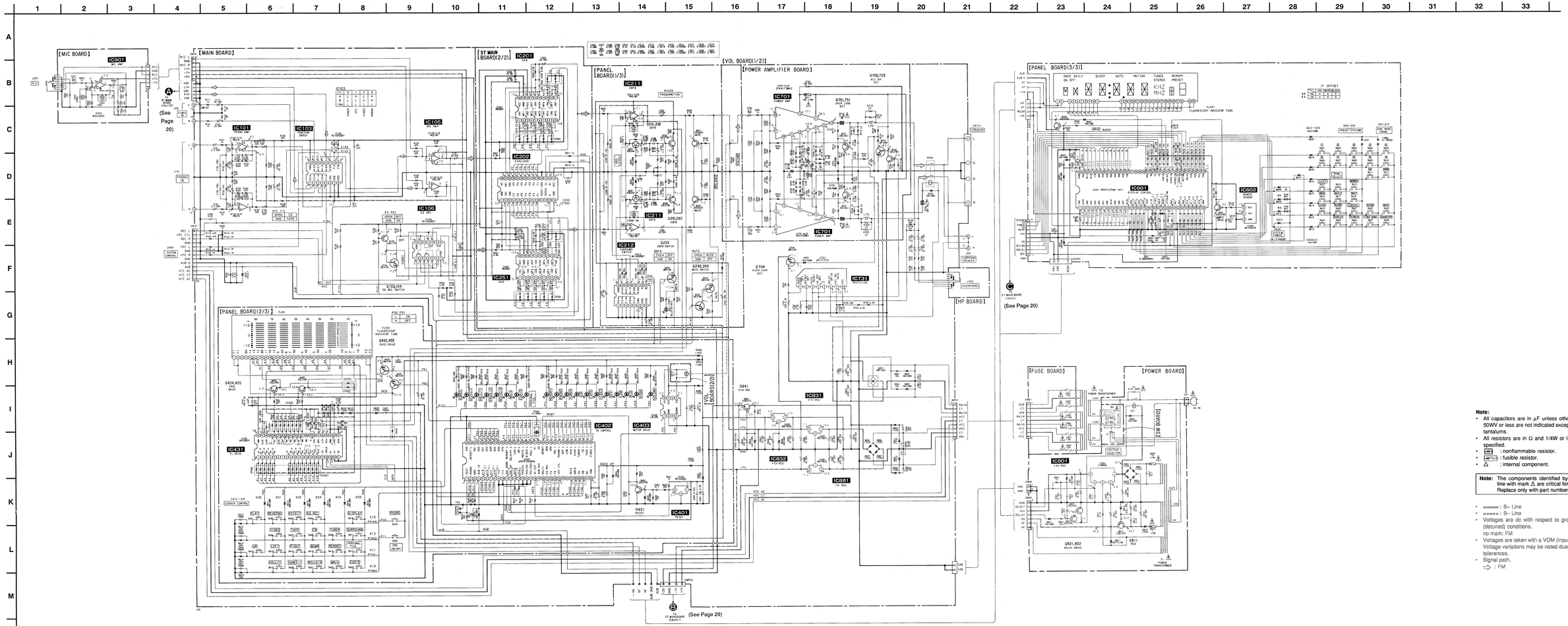
Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- ——— : B+ Line
- ▭▭▭ : B– Line
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

G : Germany
IT : Italian
EE : East European

3-11. SCHEMATIC DIAGRAM

- MAIN SECTION (STR-A37)
- See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

- : B+ Line
- : B− Line
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

SEMICONDUCTOR LOCATION

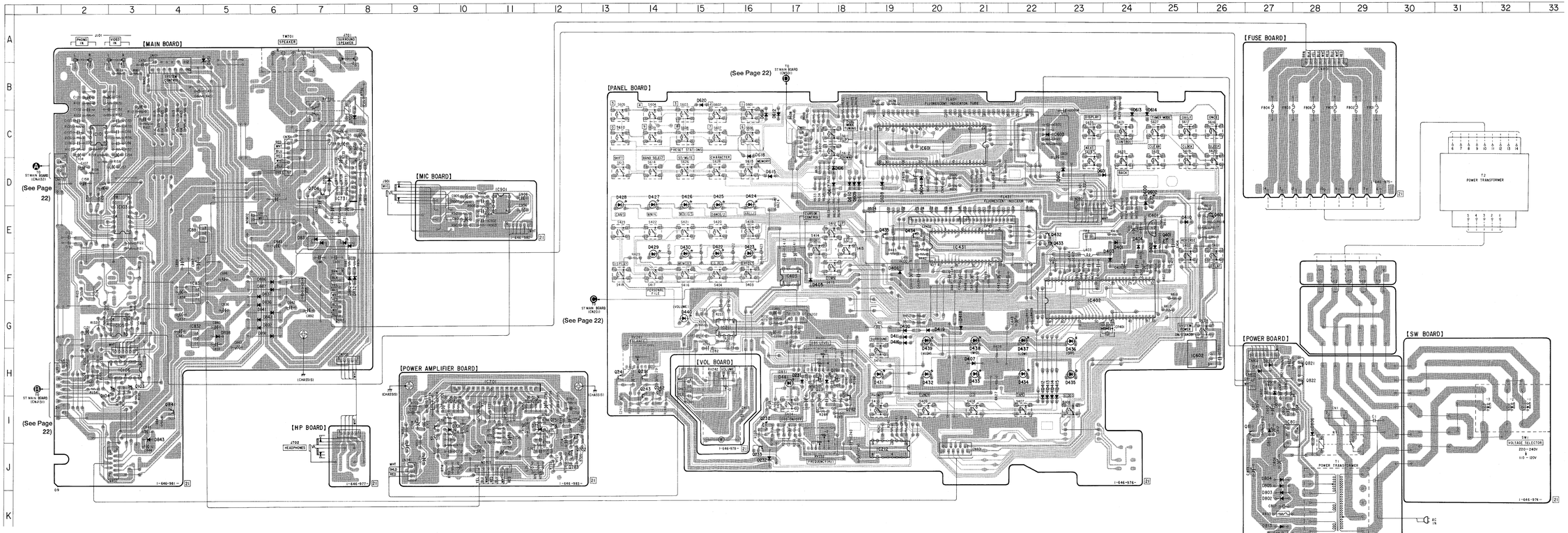
Ref. No.	Location	Ref. No.	Location
D231	H-17	D806	I-28
D232	J-17	D811	H-27
D281	H-18	D812	J-27
D401	E-24	D813	K-27
D402	E-25	D821	H-27
D403	F-24	D831	E-7
D404	E-24	D832	F-8
D405	F-17	D836	G-6
D406	F-19	D837	F-6
D407	H-21	D838	G-5
D410	E-25	D841	G-6
D411	G-19	D842	G-6
D412	I-22	D843	I-3
D413	I-22	D882	F-8
D414	I-22	D886	F-6
D415	I-23	D887	F-6
D416	G-19		
D418	G-21	IC101	C-2
D419	G-20	IC103	E-3
D420	G-19	IC105	G-3
D422	F-15	IC106	H-3
D423	F-16	IC211	G-16
D424	E-16	IC212	J-19
D425	E-15	IC401	E-25
D426	E-15	IC402	G-23
D427	E-14	IC403	F-17
D428	E-13	IC431	E-21
D429	F-14	IC601	C-20
D430	F-15	IC602	H-26
D431	H-19	IC701	H-11
D432	H-20	IC731	D-8
D433	H-21	IC801	I-28
D434	H-22	IC831	A-4
D435	H-23	IC832	G-4
D436	G-23	IC881	E-4
D437	G-22	IC901	D-11
D438	G-21		
D439	G-20	Q103	H-3
D440	G-15	Q104	H-3
D441	H-17	Q231	H-18
D451	A-5	Q232	I-16
D600	D-24	Q233	J-16
D601	D-24	Q241	H-13
D602	D-23	Q242	I-14
D603	C-22	Q243	I-14
D604	D-20	Q281	H-18
D608	D-19	Q282	I-18
D609	D-18	Q291	H-14
D610	D-18	Q401	E-25
D611	D-18	Q432	E-22
D612	C-17	Q433	E-22
D613	C-24	Q434	E-20
D614	C-24	Q435	E-19
D615	D-17	Q601	E-26
D616	D-18	Q602	D-25
D617	D-18	Q701	I-9
D619	C-16	Q702	I-12
D620	B-15	Q703	J-12
D701	I-10	Q704	D-7
D702	D-7	Q751	I-12
D703	C-8	Q811	I-27
D751	I-12	Q821	H-28
D801	H-27	Q822	H-28
D802	K-27	Q841	I-4
D803	K-27		
D804	J-27		
D805	J-27		

3-12. PRINTED WIRING BOARD

- **MAIN SECTION (STR-A37)**
- **See page 6 for Circuit Boards Location.**

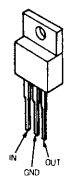
Note:

- : indicates side identified with part number.
- △ : internal component.
- ○—— : parts extracted from the components side.

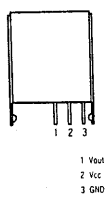


3-13. SEMICONDUCTOR LEAD LAYOUTS

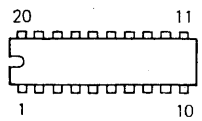
AN6291
M5F78M05L
M5F78M07L



GP1U50XB

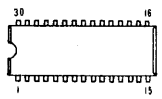


IR3R42
M5289P



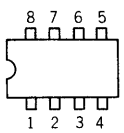
(Top view)

LA1851N



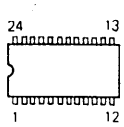
(Top view)

LB1639
M5218AP



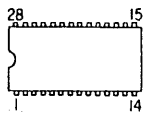
(Top view)

LC7218



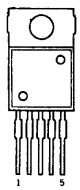
(Top view)

LC7522
LC7522K

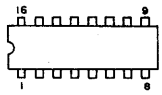


(Top view)

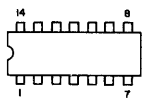
L78MR06



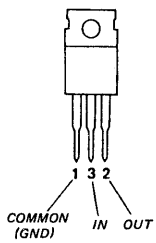
MC14052BCP
MC14053BCP



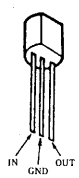
MC14066BCP



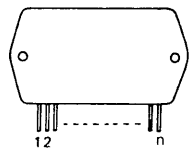
M5F79M07L



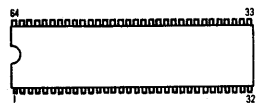
M51943BSL



STK-4152MK2K
STK-4172MK2K

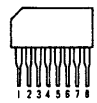


TMP47C1270AN-H211
uPD75104CW-286

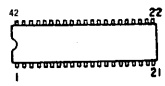


(Top view)

uPC1237HA

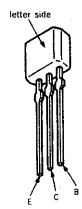


XR-1095

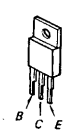


(Top view)

DTA124ES
2SA1175-HFE
2SC2785-HFE

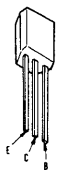


2SB1094-LK
2SD2012



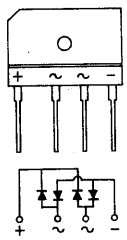
2SC1841-PAFAEA
2SC3112-B

2SC2603-EF
2SC2669-0Y
2SC3622A-LK
DTA114ES
DTC114ES
DTC124ES

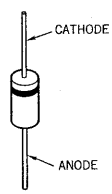


2SK246-GR3
2SK246-Y

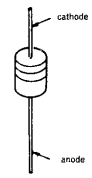
RBV-602-01



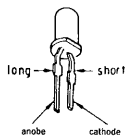
1N4148M
UZL-12M3
UZP-5.6B



HZS6A1L
UZL-33L
11ES2

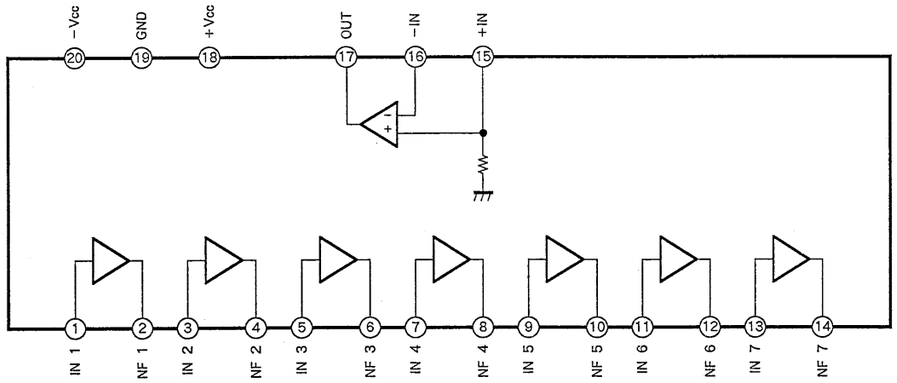


SEL2210S-CD
SEL3210S-CD

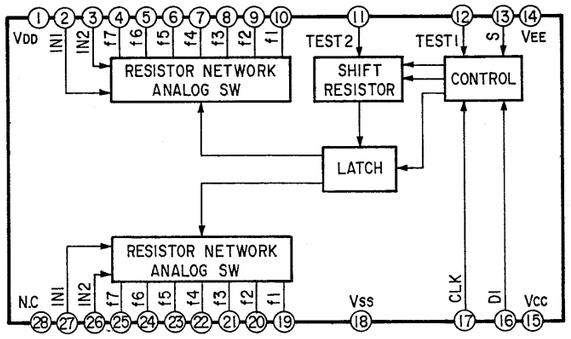


3-14. IC BLOCK DIAGRAMS

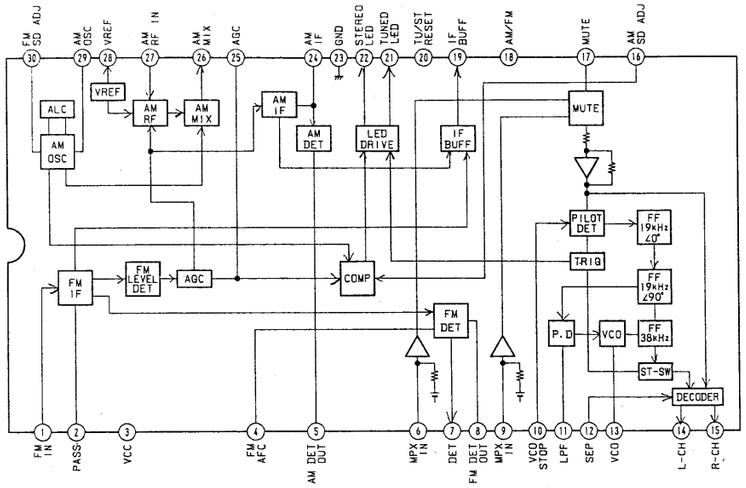
• IC201, 251 M5289P



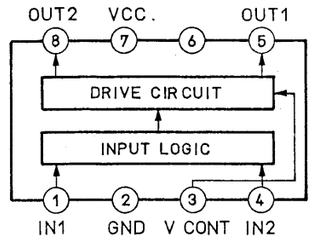
• IC202 LC7522



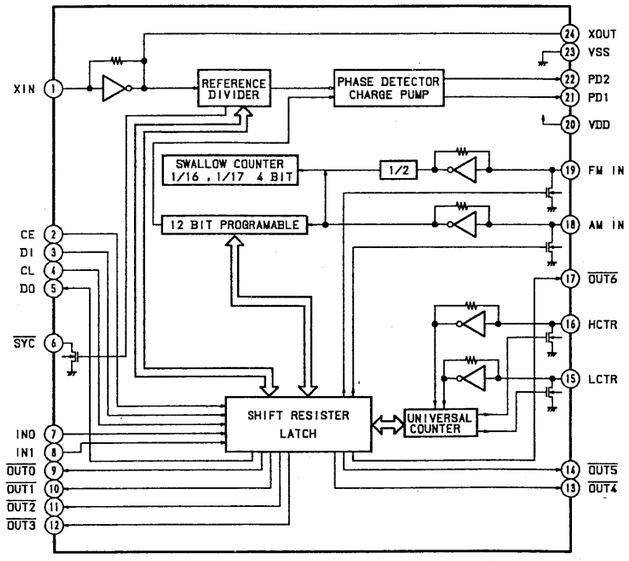
• IC301 LA1851N



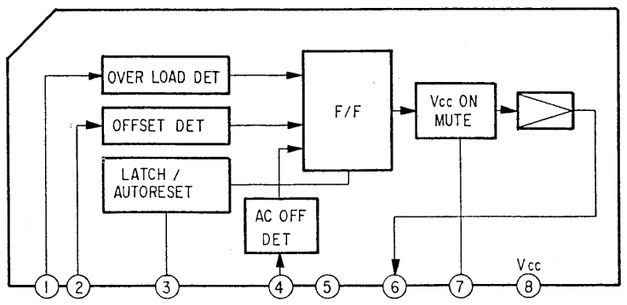
• IC403 LB1639



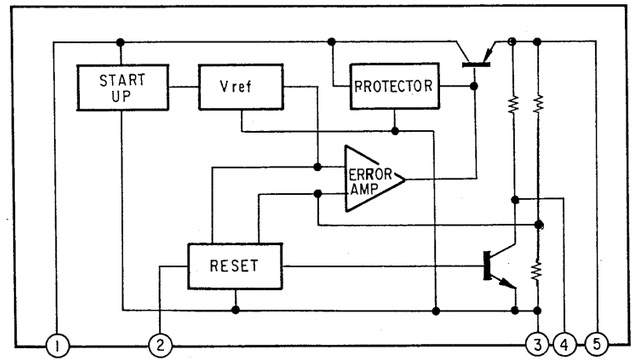
• IC501 LC7218



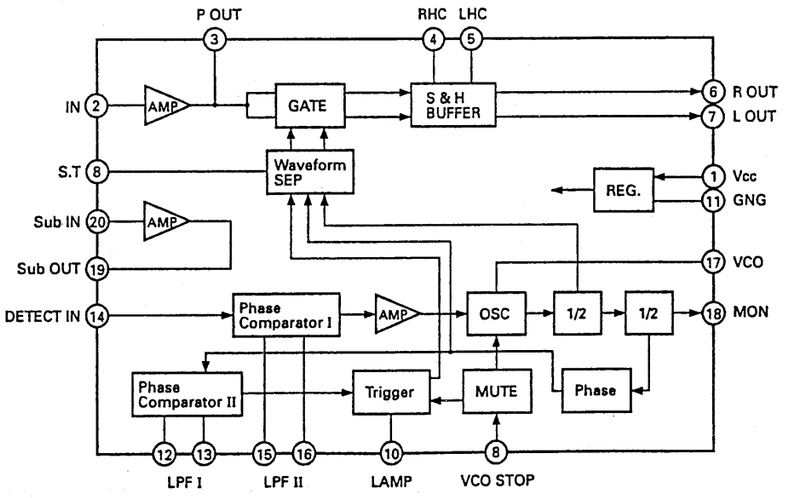
• IC731 uPC1237HA



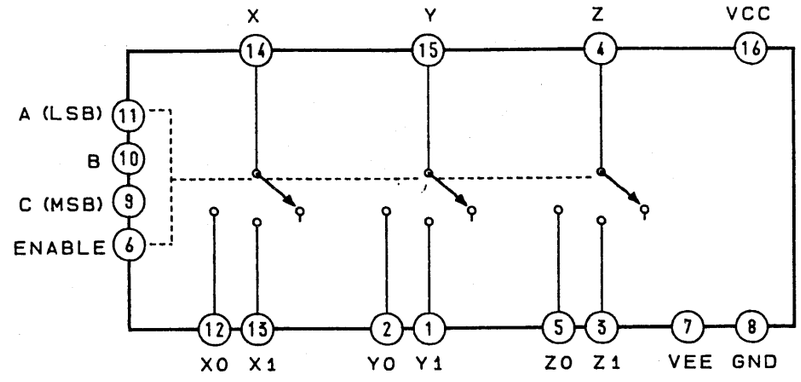
• IC801 L78MR06



• IC1701 IR3R42



• IC1703 MC14053BCP

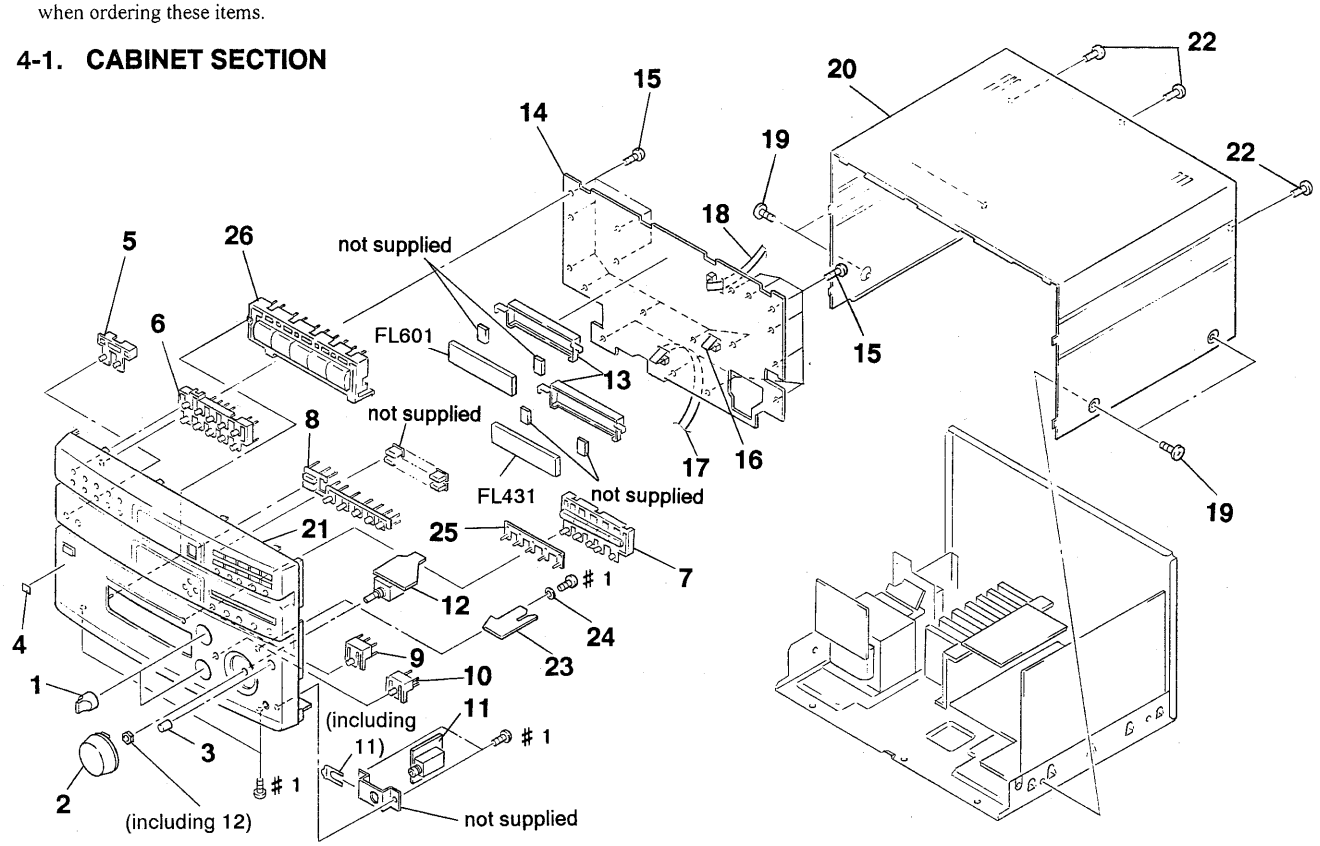


SECTION 4
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Hardware (# mark) list is given in the last of this parts list.
- G : Germany model
- IT : Italian model
- AUS : Australian model
- EE : East European model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-1. CABINET SECTION

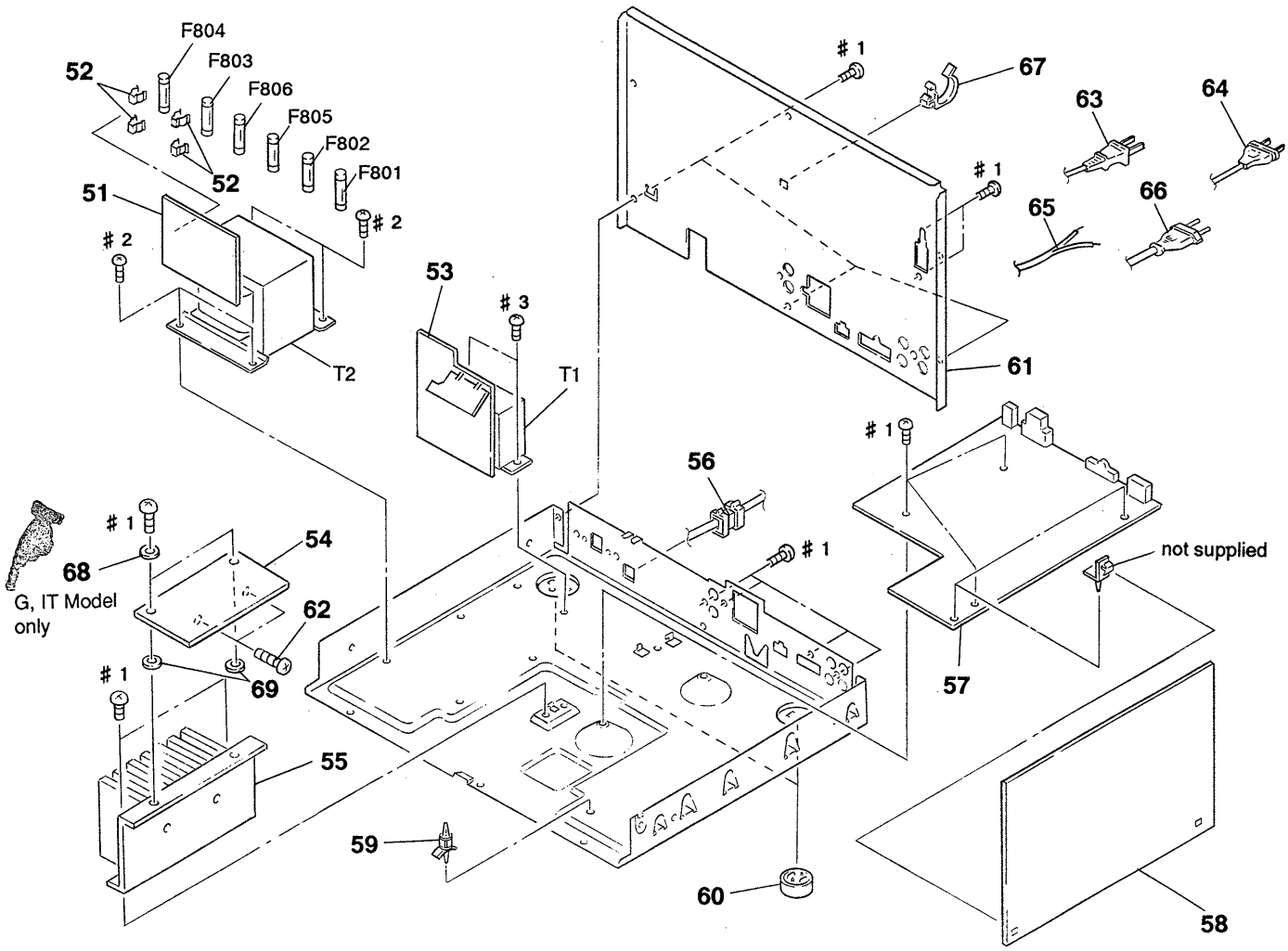


Ref. No.	Part No.	Description	Remark
1	4-955-636-01	KNOB (DB) (D309)	
	4-955-636-22	KNOB (DB) (A37, D359)	
2	4-955-635-01	KNOB (V) (D309)	
	4-955-635-21	KNOB (V) (A37, D359)	
3	4-955-744-01	KNOB (BA) (D309)	
	4-955-744-21	KNOB (BA) (A37, D359)	
* 4	3-703-713-41	STICKER, SONY SYMBOL (10)	
5	4-955-741-01	BUTTON (PR) (D309)	
	4-955-741-21	BUTTON (PR) (A37, D359)	
6	4-955-765-01	BUTTON (TIMER) (D309)	
7	X-4943-302-1	BUTTON (SELECT 5) ASSY (D309)	
	X-4943-304-1	BUTTON (SELECT 5) ASSY (A37, D359)	
8	X-4943-303-1	BUTTON (DBFB) ASSY (A37, D359)	
9	4-955-774-01	BUTTON (SURROUND) (D309)	
10	4-955-767-01	BUTTON (EFFECT) (D309)	
* 11	1-646-977-11	HP BOARD (D309)	
*	1-646-977-21	HP BOARD (A37, D359)	
* 12	1-646-978-11	VOL BOARD (D309)	
*	1-646-978-21	VOL BOARD (A37, D359)	
* 13	4-942-301-01	HOLDER, FL TUBE	
* 14	A-4356-896-A	PANEL BOARD, COMPLETE (D309:AEP)	
*	A-4356-977-A	PANEL BOARD, COMPLETE (D359:AEP)	
*	A-4356-995-A	PANEL BOARD, COMPLETE (A37:E, AUS, PX)	
*	A-4360-124-A	PANEL BOARD, COMPLETE (D309:G)	
*	A-4360-183-A	PANEL BOARD, COMPLETE (D309:IT)	

Ref. No.	Part No.	Description	Remark
* 14	A-4360-500-A	PANEL BOARD, COMPLETE (D359:IT)	
*	A-4360-812-A	PANEL BOARD, COMPLETE (D309:EE, CIS)	
*	A-4360-917-A	PANEL BOARD, COMPLETE (D359:UK)	
15	4-951-620-01	SCREW (2.6X8), +BVTP	
16	1-696-986-31	WIRE (FLAT TYPE) (7 CORE)	
17	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
18	1-751-025-11	WIRE (FLAT TYPE) (9 CORE) (A37, D359)	
	1-751-025-31	WIRE (FLAT TYPE) (9 CORE) (A37, D309, D359)	
19	3-704-366-01	SCREW (CASE) (M3X8) (A37, D309:AEP, G, IT, EE, CIS, D359)	
* 20	4-955-759-11	CASE (D309)	
*	4-955-759-51	CASE (A37, D359)	
21	X-4943-296-1	PANEL ASSY, FRONT (D309)	
	X-4943-299-1	PANEL ASSY, FRONT (D359)	
	X-4943-300-1	PANEL ASSY, FRONT (A37)	
22	3-703-685-21	SCREW (+BV 3X8) (A37, D359)	
* 23	1-646-980-21	MIC BOARD (A37)	
24	3-330-034-01	WASHER (A37, D359)	
	3-564-542-00	WASHER, FIBER (D309:AEP, G, IT, EE, CIS)	
25	4-955-771-01	INDICATOR (SELECT 5) (D309)	
26	X-4943-179-1	BUTTON (FU) ASSY (D309)	
FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT	
FL601	1-519-711-11	INDICATOR TUBE, FLUORESCENT	

REVISED

4-2. CHASSIS SECTION



REVISED

Ref. No.	Part No.	Description	Remark
* 51	1-646-972-11	FUSE BOARD (D309)	
*	1-646-972-21	FUSE BOARD (D359)	
52	1-533-217-31	HOLDER, FUSE (D309)	
*	1-533-213-11	HOLDER, FUSE (A37/D359)	
* 53	A-4356-906-A	POWER BOARD, COMPLETE (D309:AEP, G, IT, EE, CIS)	
*	A-4356-987-A	POWER BOARD, COMPLETE (D359:AEP, IT)	
*	A-4356-993-A	POWER BOARD, COMPLETE (D359:UK)	
*	A-4360-002-A	POWER BOARD, COMPLETE (A37)	
* 54	A-4356-905-A	POWER AMPLIFIER BOARD, COMPLETE (D309:AEP, EE, CIS)	
*	A-4356-986-A	POWER AMPLIFIER BOARD, COMPLETE (D359:AEP)	
*	A-4356-992-A	POWER AMPLIFIER BOARD, COMPLETE (D359:UK)	
*	A-4360-001-A	POWER AMPLIFIER BOARD, COMPLETE (A37)	
*	A-4360-132-A	POWER AMPLIFIER BOARD, COMPLETE (D309:G, IT)	
*	A-4360-506-A	POWER AMPLIFIER BOARD, COMPLETE (D359:IT)	
* 55	4-955-775-01	HEAT SINK (L3-E) (D309:AEP, G, IT, EE, CIS)	
* 56	3-703-244-00	BUSHING (2104), CORD (A37:AUS, D309, D359)	
*	3-703-571-11	BUSHING (S)(4516), CORD (A37:E, PX)	
* 57	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP)	
*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4356-991-A	MAIN BOARD, COMPLETE (D359:UK)	
*	A-4360-000-A	MAIN BOARD, COMPLETE (A37)	
*	A-4360-131-A	MAIN BOARD, COMPLETE (D309:G)	
*	A-4360-177-A	MAIN BOARD, COMPLETE (D309:AEP, EE, CIS)	
*	A-4360-185-A	MAIN BOARD, COMPLETE (D309:IT)	
*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4360-505-A	MAIN BOARD, COMPLETE (D359:IT)	
* 58	A-4356-901-A	ST MAIN BOARD, COMPLETE (D309:AEP)	
*	A-4356-982-A	ST MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4356-989-A	ST MAIN BOARD, COMPLETE (D359:UK)	
*	A-4356-998-A	ST MAIN BOARD, COMPLETE (A37)	
*	A-4360-123-A	ST MAIN BOARD, COMPLETE (D309:G, IT)	
*	A-4360-503-A	ST MAIN BOARD, COMPLETE (D359:IT)	
*	A-4360-814-A	ST MAIN BOARD, COMPLETE (D309:EE)	
*	A-4360-817-A	ST MAIN BOARD, COMPLETE (D309:CIS)	
59	4-943-687-01	HOLDER, PC BOARD	
60	4-933-601-01	FOOT (A37, D359)	
	X-4941-228-1	FOOT ASSY (D309)	
* 61	4-955-769-11	PANEL, BACK (D309:AEP)	
*	4-955-769-21	PANEL, BACK (D309:CIS)	
*	4-955-769-31	PANEL, BACK (D309:IT)	
*	4-955-769-41	PANEL, BACK (D309:G)	
*	4-955-769-51	PANEL, BACK (D309:AEP)	
*	4-955-769-61	PANEL, BACK (D309:AEP)	
*	4-955-769-71	PANEL, BACK (D309:EE)	
*	4-955-828-11	PANEL, BACK (D359:AEP)	
*	4-955-828-21	PANEL, BACK (D359:UK)	
*	4-955-828-31	PANEL, BACK (D359:IT)	
*	4-955-828-51	PANEL, BACK (D359:AEP)	
*	4-955-828-61	PANEL, BACK (A37:E, PX)	
*	4-955-828-71	PANEL, BACK (A37:AUS)	
62	4-928-635-11	SCREW, +BV (2.6X16) TAPPING	
⚠63	1-575-653-11	CORD, POWER (A37:E, PX)	
⚠64	1-690-608-11	CORD, POWER (A37:AUS)	
⚠65	1-696-570-21	CORD, POWER (D359:UK)	
⚠66	1-575-651-11	CORD, POWER (D309:AEP, G, IT, EE, CIS/D359:AEP, IT)	
67	4-956-370-02	BAND, PLUG FIXED (A37:AUS)	
68	4-960-342-21	WASHER (HEAT SINK) (G, IT)	
69	4-960-342-31	WASHER (HEAT SINK)	
⚠F801	1-532-078-00	FUSE (1A)	
⚠F802	1-532-078-00	FUSE (1A)	

Ref. No.	Part No.	Description	Remark
⚠F803	1-532-299-00	FUSE (5A)	
⚠F804	1-532-299-00	FUSE (5A)	
⚠F805	1-532-286-00	FUSE (2.5A)	
⚠F806	1-532-286-00	FUSE (2.5A)	
⚠T1	1-423-646-21	TRANSFORMER, POWER (D359)	
⚠	1-423-646-31	TRANSFORMER, POWER (D309)	
⚠	1-423-647-21	TRANSFORMER, POWER (A37)	
⚠T2	1-423-499-11	TRANSFORMER, POWER (D309)	
⚠	1-423-499-21	TRANSFORMER, POWER (D359)	
⚠	1-423-500-21	TRANSFORMER, POWER (A37)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

REVISED

SECTION 5
ELECTRICAL PARTS LIST

FUSE | HP | MAIN

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Hardware (# mark) list is given in the last of this parts list.
- G : Germany model
- IT : Italian model
- EE : East European model
- CIS : Common Independent States model
- AUS: Australian model
  AEP1: AEP with out POWER SOURCE
  AEP2: AEP with POWER SOURCE

Ref. No.	Part No.	Description	Remark
*	1-646-972-11	FUSE BOARD (D309)	
		**********	
*	1-646-972-21	FUSE BOARD (D359)	
		**********	
*	1-646-975-21	FUSE BOARD (A37)	
		**********	
		< CONNECTOR >	
* CN801	1-564-512-11	PLUG, CONNECTOR 9P	
**********			
*	1-646-977-11	HP BOARD (D309)	
		**********	
*	1-646-977-21	HP BOARD (A37/D359)	
		**********	
		< JACK >	
* J702	1-691-003-11	JACK, LARGE TYPE (HEADPHONES)	
**********			
*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP2)	
		**********	
*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP2)	
		**********	
*	A-4360-000-A	MAIN BOARD, COMPLETE (A37)	
		**********	
*	A-4360-131-A	MAIN BOARD, COMPLETE (D309:G)	
		**********	
*	A-4360-177-A	MAIN BOARD, COMPLETE (D309:AEP1, EE, CIS)	
		**********	
*	A-4360-185-A	MAIN BOARD, COMPLETE (D309:IT)	
		**********	
*	A-4360-505-A	MAIN BOARD, COMPLETE (D359:IT)	
		**********	
*	A-4360-991-A	MAIN BOARD, COMPLETE (D359:UK)	
		**********	
*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP1)	

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C101	1-124-925-11	ELECT	2.2uF	20%	100V
C102	1-164-073-11	CERAMIC	100PF	10%	50V
C103	1-164-066-11	CERAMIC	68PF	5%	50V
C104	1-124-126-00	ELECT	47uF	20%	10V
C105	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C106	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C107	1-124-464-11	ELECT	0.22uF	20%	50V
C108	1-124-126-00	ELECT	47uF	20%	10V
C111	1-124-916-11	ELECT	22uF	20%	63V
C131	1-124-907-11	ELECT	10uF	20%	50V
C132	1-164-159-11	CERAMIC	0.1uF		50V
C133	1-164-159-11	CERAMIC	0.1uF		50V
C141	1-162-286-31	CERAMIC	220PF	10%	50V (D309:G, IT/D359:IT)
C142	1-162-286-31	CERAMIC	220PF	10%	50V (D309:G, IT/D359:IT)
C151	1-124-925-11	ELECT	2.2uF	20%	100V
C152	1-164-073-11	CERAMIC	100PF	10%	50V
C153	1-164-066-11	CERAMIC	68PF	5%	50V
C154	1-124-126-00	ELECT	47uF	20%	10V
C155	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C156	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C157	1-124-464-11	ELECT	0.22uF	20%	50V
C158	1-124-126-00	ELECT	47uF	20%	10V
C161	1-124-916-11	ELECT	22uF	20%	63V
C181	1-124-907-11	ELECT	10uF	20%	50V
C182	1-164-159-11	CERAMIC	0.1uF		50V
C183	1-164-159-11	CERAMIC	0.1uF		50V
C191	1-162-286-31	CERAMIC	220PF	10%	50V (D309:G, IT/D359:IT)
C192	1-162-286-31	CERAMIC	220PF	10%	50V (D309:G, IT/D359:IT)
C431	1-161-379-00	CERAMIC	0.01uF	20%	25V
C432	1-161-379-00	CERAMIC	0.01uF	20%	25V
C731	1-126-176-11	ELECT	220uF	20%	10V
C732	1-126-176-11	ELECT	220uF	20%	10V
C733	1-124-443-00	ELECT	100uF	20%	10V
C734	1-124-916-11	ELECT	22uF	20%	63V
C735	1-124-916-11	ELECT	22uF	20%	63V
C741	1-136-163-00	FILM	0.068uF	5%	50V (D309:G, IT/D359:IT)

REVISED

MAIN

Ref.No.	Part No.	Description				Remark
C742	1-136-163-00	FILM	0.068uF	5%	50V	
			(D309:G, IT/D359:IT)			
C743	1-162-294-31	CERAMIC	0.001uF	10%	50V	
			(D309:G, IT/D359:IT)			
C784	1-124-916-11	ELECT	22uF	20%	63V	
C785	1-124-916-11	ELECT	22uF	20%	63V	
C791	1-136-163-00	FILM	0.068uF	5%	50V	
			(D309:G, IT/D359:IT)			
C792	1-136-163-00	FILM	0.068uF	5%	50V	
			(D309:G, IT/D359:IT)			
C793	1-162-294-31	CERAMIC	0.001uF	10%	50V	
			(D309:G, IT/D359:IT)			
C831	1-136-161-00	FILM	0.047uF	5%	50V	
C833	1-126-138-11	ELECT	4700uF	20%	50V	
						(A37)
C833	1-126-224-11	ELECT	4700uF	20%	42V	
					(D309, D359)	
C834	1-124-903-11	ELECT	1uF	20%	50V	
C835	1-102-394-11	CERAMIC	0.01uF		250V	
C836	1-124-557-11	ELECT	1000uF	20%	25V	
C837	1-124-907-11	ELECT	10uF	20%	50V	
C838	1-124-907-11	ELECT	10uF	20%	50V	
C839	1-124-477-11	ELECT	47uF	20%	25V	
C840	1-124-477-11	ELECT	47uF	20%	25V	
						(A37)
C840	1-124-126-00	ELECT	47uF	20%	10V	
					(D309/D359)	
C841	1-124-907-11	ELECT	10uF	20%	50V	
C842	1-124-122-11	ELECT	100uF	20%	50V	
C843	1-126-105-11	ELECT	1000uF	20%	35V	
C844	1-126-101-11	ELECT	100uF	20%	16V	
C845	1-126-101-11	ELECT	100uF	20%	16V	
C846	1-124-122-11	ELECT	100uF	20%	50V	
			(D309:AEP2, G/D359:AEP2, UK)			
C847	1-124-477-11	ELECT	47uF	20%	25V	
					(D359:AEP2, UK)	
C847	1-124-910-11	ELECT	47uF	20%	50V	
					(D309:AEP2, G)	
C881	1-136-161-00	FILM	0.047uF	5%	50V	
C883	1-126-138-11	ELECT	4700uF	20%	50V	
						(A37)
C883	1-126-224-11	ELECT	4700uF	20%	42V	
					(D309/D359)	
C886	1-124-480-11	ELECT	470uF	20%	25V	
C887	1-124-477-11	ELECT	47uF	20%	25V	
C888	1-124-907-11	ELECT	10uF	20%	50V	
C892	1-124-122-11	ELECT	100uF	20%	50V	
C897	1-161-377-00	CERAMIC	0.0047uF	30%	25V	
			(D309:G, IT/D359:IT)			
		< CONNECTOR >				
* CN101	1-565-291-11	SOCKET, CONNECTOR 13P				
						(SYSTEM CONTROL)
* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE)				
						(D309:AEP2, G/D359:AEP2, UK)
* CN131	1-568-955-11	PIN, CONNECTOR 6P (A37)				
* CN402	1-568-830-11	SOCKET, CONNECTOR 11P				
* CN701	1-564-510-11	PLUG, CONNECTOR 7P				
* CN702	1-568-954-11	PIN, CONNECTOR 5P				
CNP131	1-695-090-11	PIN, CONNECTOR (PC BOARD) 13P				
CNP132	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P				
		< DIODE >				
D451	8-719-933-33	DIODE	HZS6A1L			
D702	8-719-987-63	DIODE	1N4148M			
D703	8-719-987-63	DIODE	1N4148M			
D831	8-719-302-38	DIODE	RBV-602-01			
D832	8-719-987-63	DIODE	1N4148M			
D836	8-719-200-82	DIODE	11ES2			
D837	8-719-200-82	DIODE	11ES2			
D838	8-719-987-63	DIODE	1N4148M			
D841	8-719-200-82	DIODE	11ES2			
D842	8-719-200-82	DIODE	11ES2			
D843	8-719-001-76	DIODE	UZL-12M3			
D882	8-719-987-63	DIODE	1N4148M			
D886	8-719-200-82	DIODE	11ES2			
D887	8-719-200-82	DIODE	11ES2			
D891	8-719-200-82	DIODE	11ES2			
D892	8-719-200-82	DIODE	11ES2			
		< IC >				
IC101	8-759-634-51	IC	M5218AP			
IC103	8-759-000-48	IC	MC14052BCP			
IC105	8-759-634-51	IC	M5218AP			
IC106	8-759-000-49	IC	MC14066BCP			
IC731	8-759-111-68	IC	uPC1237HA			
IC831	8-759-605-00	IC	M5F78M07L			
IC832	8-759-604-35	IC	M5F78M05L			
IC841	8-759-604-39	IC	AN6291			
			((D309:AEP2, G/D359:AEP2, UK)			
IC881	8-759-604-95	IC	M5F79M07L			
		< JACK >				
* J101	1-580-912-11	JACK, PIN 4P (PHONO/VIDEO IN)				
						(D309)
* J101	1-580-912-21	JACK, PIN 4P (PHONO/VIDEO IN)				
						(A37/D359)
* J701	1-569-130-11	JACK, PIN 2P (SURROUND SPEAKER)				
		< COIL >				
L702	1-420-872-00	COIL, AIR CORE (D309:G, IT/D359:IT)				
L752	1-420-872-00	COIL, AIR CORE (D309:G, IT/D359:IT)				
		< TRANSISTOR >				
Q103	8-729-119-76	TRANSISTOR	2SA1175-HFE			

REVISED

R733 1-249-436-11 CARBON 39K 5% 1/4W (EXCEPT D359:AEP1)

R733 1-249-437-11 CARBON 47K 5% 1/4W (D359:AEP1)

MAIN **MIC**

Ref. No.	Part No.	Description				Remark
Q104	8-729-900-36	TRANSISTOR	DTC124ES			
Q704	8-729-900-63	TRANSISTOR	DTA124ES			
Q841	8-729-209-15	TRANSISTOR	2SD2012			
		< RESISTOR >				
R101	1-249-417-11	CARBON	1K	5%	1/4W	
R102	1-249-437-11	CARBON	47K	5%	1/4W	
R104	1-249-416-11	CARBON	820	5%	1/4W	
R105	1-247-897-11	CARBON	560K	5%	1/4W	
R106	1-249-437-11	CARBON	47K	5%	1/4W	
R107	1-249-409-11	CARBON	220	5%	1/4W	
R108	1-249-441-11	CARBON	100K	5%	1/4W	
R109	1-249-409-11	CARBON	220	5%	1/4W	
R111	1-249-417-11	CARBON	1K	5%	1/4W	
R112	1-247-903-00	CARBON	1M	5%	1/4W	
R113	1-249-417-11	CARBON	1K	5%	1/4W	
R114	1-247-903-00	CARBON	1M	5%	1/4W	
R115	1-249-413-11	CARBON	470	5%	1/4W	
R116	1-247-903-00	CARBON	1M	5%	1/4W	
R121	1-249-433-11	CARBON	22K	5%	1/4W	
R122	1-249-433-11	CARBON	22K	5%	1/4W	
R123	1-249-433-11	CARBON	22K	5%	1/4W	
R124	1-249-433-11	CARBON	22K	5%	1/4W	
R131	1-249-437-11	CARBON	47K	5%	1/4W	
R132	1-249-437-11	CARBON	47K	5%	1/4W	(A37)
R133	1-249-437-11	CARBON	47K	5%	1/4W	
R135	1-249-433-11	CARBON	22K	5%	1/4W	
R136	1-249-433-11	CARBON	22K	5%	1/4W	
R137	1-249-433-11	CARBON	22K	5%	1/4W	
R141	1-249-417-11	CARBON	1K	5%	1/4W	(D309:G, IT/D359:IT)
R151	1-249-417-11	CARBON	1K	5%	1/4W	
R152	1-249-437-11	CARBON	47K	5%	1/4W	
R154	1-249-416-11	CARBON	820	5%	1/4W	
R155	1-247-897-11	CARBON	560K	5%	1/4W	
R156	1-249-437-11	CARBON	47K	5%	1/4W	
R157	1-249-409-11	CARBON	220	5%	1/4W	
R158	1-249-441-11	CARBON	100K	5%	1/4W	
R159	1-249-409-11	CARBON	220	5%	1/4W	
R161	1-249-417-11	CARBON	1K	5%	1/4W	
R162	1-247-903-00	CARBON	1M	5%	1/4W	
R163	1-249-417-11	CARBON	1K	5%	1/4W	
R164	1-247-903-00	CARBON	1M	5%	1/4W	
R165	1-249-413-11	CARBON	470	5%	1/4W	
R166	1-247-903-00	CARBON	1M	5%	1/4W	
R181	1-249-437-11	CARBON	47K	5%	1/4W	
R182	1-249-437-11	CARBON	47K	5%	1/4W	(A37)
R183	1-249-437-11	CARBON	47K	5%	1/4W	
R191	1-249-417-11	CARBON	1K	5%	1/4W	(D309:G, IT/D359:IT)
R204	1-249-421-11	CARBON	2.2K	5%	1/4W	
R205	1-249-427-11	CARBON	6.8K	5%	1/4W	
R254	1-249-421-11	CARBON	2.2K	5%	1/4W	
R255	1-249-427-11	CARBON	6.8K	5%	1/4W	
R431	1-249-393-11	CARBON	10	5%	1/4W	
R432	1-249-417-11	CARBON	1K	5%	1/4W	
R728	1-249-438-11	CARBON	56K	5%	1/4W	
R731	1-249-429-11	CARBON	10K	5%	1/4W	
R732	1-249-441-11	CARBON	100K	5%	1/4W	
~~R733~~	~~1-249-436-11~~	~~CARBON~~	~~39K~~	~~5%~~	~~1/4W~~	
R734	1-249-427-11	CARBON	6.8K	5%	1/4W	
R735	1-249-427-11	CARBON	6.8K	5%	1/4W	
⚠R736	1-215-891-11	METAL OXIDE	680	5%	2W	F
R737	1-249-410-11	CARBON	270	5%	1/4W	
R738	1-249-410-11	CARBON	270	5%	1/4W	
R741	1-249-389-11	CARBON	4.7	5%	1/4W	(D309:G, IT/D359:IT)
R742	1-249-389-11	CARBON	4.7	5%	1/4W	(D309:G, IT/D359:IT)
R778	1-249-437-11	CARBON	47K	5%	1/4W	
R787	1-249-410-11	CARBON	270	5%	1/4W	
R788	1-249-410-11	CARBON	270	5%	1/4W	
R791	1-249-389-11	CARBON	4.7	5%	1/4W	(D309:G, IT/D359:IT)
R792	1-249-389-11	CARBON	4.7	5%	1/4W	(D309:G, IT/D359:IT)
R831	1-249-429-11	CARBON	10K	5%	1/4W	
R841	1-249-421-11	CARBON	2.2K	5%	1/4W	
R881	1-249-429-11	CARBON	10K	5%	1/4W	
		< RELAY >				
RY701	1-515-533-11	RELAY				
		< TERMINAL >				
TM701	1-537-481-11	TERMINAL BOARD (SPEAKER)				(D309:G, IT/D359:IT)
TM701	1-537-494-11	TERMINAL BOARD (SPEAKER)				(A37/D309:AEP, EE, CIS/D359:AEP, UK)
**********						
*	1-646-980-21	MIC BOARD (A37)				
		**********				
		< CAPACITOR >				
C901	1-124-925-11	ELECT	2.2uF	20%	100V	
C902	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C903	1-162-219-31	CERAMIC	68PF	5%	50V	
C904	1-162-284-31	CERAMIC	150PF	10%	50V	
C905	1-124-464-11	ELECT	0.22uF	20%	50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MIC PANEL

Ref.No.	Part No.	Description				Remark
C906	1-124-477-11	ELECT	47uF	20%	25V	
C956	1-124-477-11	ELECT	47uF	20%	25V	
		< IC >				
IC901	8-759-634-51	IC M5218AP				
		< JACK >				
* J901	1-573-151-21	JACK, LARGE TYPE (MIC)				
		< RESISTOR >				
R901	1-249-429-11	CARBON	10K	5%	1/4W	
R902	1-249-417-11	CARBON	1K	5%	1/4W	
R903	1-249-441-11	CARBON	100K	5%	1/4W	
R904	1-249-412-11	CARBON	390	5%	1/4W	
R905	1-249-441-11	CARBON	100K	5%	1/4W	
R906	1-249-417-11	CARBON	1K	5%	1/4W	
R907	1-249-429-11	CARBON	10K	5%	1/4W	
**********						
*	A-4356-896-A	PANEL BOARD, COMPLETE (D309:AEP)				
		**********				
*	A-4356-977-A	PANEL BOARD, COMPLETE (D359:AEP)				
		**********				
*	A-4356-995-A	PANEL BOARD, COMPLETE (A37)				
		**********				
*	A-4360-124-A	PANEL BOARD, COMPLETE (D309:G)				
		**********				
*	A-4360-183-A	PANEL BOARD, COMPLETE (D309:IT)				
		**********				
*	A-4360-500-A	PANEL BOARD, COMPLETE (D359:IT)				
		**********				
*	A-4360-812-A	PANEL BOARD, COMPLETE (D309:EE,CIS)				
		**********				
*	A-4360-917-A	PANEL BOARD, COMPLETE (D359:UK)				
		**********				
		< CAPACITOR >				
C231	1-164-066-11	CERAMIC	68PF	5%	50V	
C232	1-164-070-11	CERAMIC	100PF	5%	50V	
C233	1-124-907-11	ELECT	10uF	20%	50V	
C234	1-124-257-00	ELECT	2.2uF	20%	50V	
C235	1-162-282-31	CERAMIC	100PF	10%	50V	
C236	1-164-159-11	CERAMIC	0.1uF		50V	
C237	1-124-252-00	ELECT	0.33uF	20%	50V	
C238	1-136-160-00	FILM	0.039uF	5%	50V	

Ref.No.	Part No.	Description				Remark
C239	1-124-126-00	ELECT	47uF	20%	10V	
C240	1-124-126-00	ELECT	47uF	20%	10V	
C241	1-124-903-11	ELECT	1uF	20%	50V	
C242	1-124-443-00	ELECT	100uF	20%	10V	
C281	1-164-066-11	CERAMIC	68PF	5%	50V	
C282	1-164-070-11	CERAMIC	100PF	5%	50V	
C283	1-124-907-11	ELECT	10uF	20%	50V	
C284	1-124-257-00	ELECT	2.2uF	20%	50V	
C285	1-162-282-31	CERAMIC	100PF	10%	50V	
C287	1-124-252-00	ELECT	0.33uF	20%	50V	
C288	1-136-160-00	FILM	0.039uF	5%	50V	
C289	1-124-126-00	ELECT	47uF	20%	10V	
C290	1-124-126-00	ELECT	47uF	20%	10V	
C291	1-124-903-11	ELECT	1uF	20%	50V	
C401	1-126-177-11	ELECT	100uF	20%	10V	
C402	1-161-494-00	CERAMIC	0.022uF		25V	
C403	1-136-165-00	FILM	0.1uF	5%	50V	
C404	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C405	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V	
C406	1-126-157-11	ELECT	10uF	20%	16V	
C407	1-164-159-11	CERAMIC	0.1uF		50V	
C411	1-126-177-11	ELECT	100uF	20%	10V	
C412	1-161-494-00	CERAMIC	0.022uF		25V	
C414	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C415	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C416	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C417	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C441	1-126-177-11	ELECT	100uF	20%	10V	
C442	1-164-159-11	CERAMIC	0.1uF		50V	
C443	1-126-177-11	ELECT	100uF	20%	10V	
C444	1-164-159-11	CERAMIC	0.1uF		50V	
C445	1-130-471-00	MYLAR	0.001uF	5%	50V	
C446	1-126-163-11	ELECT	4.7uF	20%	50V	
C447	1-126-163-11	ELECT	4.7uF	20%	50V	
C448	1-126-157-11	ELECT	10uF	20%	16V	
C601	1-126-177-11	ELECT	100uF	20%	10V	
C602	1-164-159-11	CERAMIC	0.1uF		50V	
C604	1-126-157-11	ELECT	10uF	20%	16V	
C605	1-124-916-11	ELECT	22uF	20%	63V	
C606	1-162-202-31	CERAMIC	13PF	5%	50V	
C607	1-162-202-31	CERAMIC	13PF	5%	50V	
C608	1-126-163-11	ELECT	4.7uF	20%	50V	
C609	1-136-153-00	FILM	0.01uF	5%	50V	
C610	1-164-159-11	CERAMIC	0.1uF		50V	
		< FILTER >				
CF401	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)				

Ref.No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN202	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN401	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN601	1-568-828-11	SOCKET, CONNECTOR 9P	
		< COMPOSITION CIRCUIT BLOCK >	
CP431	1-239-054-11	COMPOSITION CIRCUIT BLOCK	
CP432	1-239-054-11	COMPOSITION CIRCUIT BLOCK	
		< DIODE >	
D231	8-719-987-63	DIODE 1N4148M	
D232	8-719-987-63	DIODE 1N4148M	
D281	8-719-987-63	DIODE 1N4148M	
D401	8-719-200-82	DIODE 11ES2	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-200-82	DIODE 11ES2	
D404	8-719-987-63	DIODE 1N4148M	
D405	8-719-200-82	DIODE 11ES2	
D406	8-719-200-82	DIODE 11ES2	
D407	8-719-200-82	DIODE 11ES2	
D410	8-719-987-63	DIODE 1N4148M	
D411	8-719-987-63	DIODE 1N4148M	
D412	8-719-987-63	DIODE 1N4148M	
D413	8-719-987-63	DIODE 1N4148M	
D414	8-719-987-63	DIODE 1N4148M	
D415	8-719-987-63	DIODE 1N4148M	
D416	8-719-987-63	DIODE 1N4148M	
D418	8-719-200-82	DIODE 11ES2	
D419	8-719-200-82	DIODE 11ES2	
D420	8-719-200-82	DIODE 11ES2	
D422	8-719-301-37	LED SEL2210S-CD	
D423	8-719-301-37	LED SEL2210S-CD	
D424	8-719-301-37	LED SEL2210S-CD	
D425	8-719-301-37	LED SEL2210S-CD	
D426	8-719-301-37	LED SEL2210S-CD	
D427	8-719-301-37	LED SEL2210S-CD	
D428	8-719-301-37	LED SEL2210S-CD	
D429	8-719-301-37	LED SEL2210S-CD	
D430	8-719-301-37	LED SEL2210S-CD	
D431	8-719-301-37	LED SEL2210S-CD	
D432	8-719-301-37	LED SEL2210S-CD	
D433	8-719-301-37	LED SEL2210S-CD	
D434	8-719-301-37	LED SEL2210S-CD	
D435	8-719-301-37	LED SEL2210S-CD	
D436	8-719-301-37	LED SEL2210S-CD	
D437	8-719-301-37	LED SEL2210S-CD	
D438	8-719-301-37	LED SEL2210S-CD	
D439	8-719-301-37	LED SEL2210S-CD	
D440	8-719-313-69	DIODE SEL3210S-CD	
D441	8-719-301-37	LED SEL2210S-CD	

Ref.No.	Part No.	Description	Remark
D600	8-719-987-63	DIODE 1N4148M	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D603	8-719-987-63	DIODE 1N4148M	
D604	8-719-987-63	DIODE 1N4148M	
D605	8-719-987-63	DIODE 1N4148M (D309:AEP, D359:AEP, UK)	
D606	8-719-987-63	DIODE 1N4148M (D309:IT/D359:IT)	
D607	8-719-987-63	DIODE 1N4148M (D309:EE, CIS)	
D608	8-719-987-63	DIODE 1N4148M (A37/D309:EE, CIS)	
D609	8-719-987-63	DIODE 1N4148M	
D610	8-719-987-63	DIODE 1N4148M	
D611	8-719-987-63	DIODE 1N4148M (A37)	
D612	8-719-987-63	DIODE 1N4148M	
D613	8-719-987-63	DIODE 1N4148M	
D614	8-719-987-63	DIODE 1N4148M	
D615	8-719-987-63	DIODE 1N4148M	
D616	8-719-987-63	DIODE 1N4148M	
D617	8-719-987-63	DIODE 1N4148M	
D618	8-719-987-63	DIODE 1N4148M	
D619	8-719-987-63	DIODE 1N4148M	
D620	8-719-987-63	DIODE 1N4148M	
		< FLUORESCENT INDICATOR >	
FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT	
FL601	1-519-732-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC211	8-759-634-51	IC M5218AP	
IC212	8-759-000-48	IC MC14052BCP	
IC401	8-759-635-63	IC M51943BSL	
IC402	8-759-160-26	IC uPD75104CW-286	
IC403	8-759-820-62	IC LB1639	
IC431	8-759-065-88	IC XR-1095	
IC601	8-759-157-67	IC TMP47C1270AN-H211	
IC602	8-749-922-36	IC GP1U50XB	
		< COIL >	
L401	1-408-080-00	INDUCTOR 100uH	
L403	1-410-521-11	INDUCTOR 100uH	
L451	1-408-080-00	INDUCTOR 100uH	
L601	1-410-521-11	INDUCTOR 100uH	
		< TRANSISTOR >	
Q231	8-729-224-61	TRANSISTOR 2SK246-Y	
Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q232	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q233	8-729-900-63	TRANSISTOR DTA124ES	
Q241	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q242	8-729-900-36	TRANSISTOR DTC124ES	

PANEL

Ref.No.	Part No.	Description	Remark
Q243	8-729-900-63	TRANSISTOR DTA124ES	
Q281	8-729-224-61	TRANSISTOR 2SK246-Y	
Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q282	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q291	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q432	8-729-900-63	TRANSISTOR DTA124ES	
Q433	8-729-900-63	TRANSISTOR DTA124ES	
Q434	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q434	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q435	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q435	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q601	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q602	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	

< RESISTOR >

Ref.No.	Part No.	Description			Remark
R230	1-247-903-00	CARBON	1M	5% 1/4W	
R231	1-249-417-11	CARBON	1K	5% 1/4W	
R232	1-247-903-00	CARBON	1M	5% 1/4W	
R233	1-249-429-11	CARBON	10K	5% 1/4W	
R234	1-249-421-11	CARBON	2.2K	5% 1/4W	
R235	1-249-423-11	CARBON	3.3K	5% 1/4W	
R236	1-249-437-11	CARBON	47K	5% 1/4W	
R237	1-249-412-11	CARBON	390	5% 1/4W	
R238	1-249-427-11	CARBON	6.8K	5% 1/4W	
R239	1-247-903-00	CARBON	1M	5% 1/4W	
R240	1-249-435-11	CARBON	33K	5% 1/4W	
R241	1-249-432-11	CARBON	18K	5% 1/4W	
R242	1-249-429-11	CARBON	10K	5% 1/4W	
R243	1-249-433-11	CARBON	22K	5% 1/4W	
R244	1-249-433-11	CARBON	22K	5% 1/4W	
R245	1-249-433-11	CARBON	22K	5% 1/4W	
R247	1-249-433-11	CARBON	22K	5% 1/4W	
R248	1-249-433-11	CARBON	22K	5% 1/4W	
R249	1-249-425-11	CARBON	4.7K	5% 1/4W	
R280	1-247-903-00	CARBON	1M	5% 1/4W	
R281	1-249-417-11	CARBON	1K	5% 1/4W	
R282	1-247-903-00	CARBON	1M	5% 1/4W	
R283	1-249-429-11	CARBON	10K	5% 1/4W	
R284	1-249-421-11	CARBON	2.2K	5% 1/4W	
R285	1-249-423-11	CARBON	3.3K	5% 1/4W	
R286	1-249-437-11	CARBON	47K	5% 1/4W	
R287	1-249-412-11	CARBON	390	5% 1/4W	
R288	1-249-427-11	CARBON	6.8K	5% 1/4W	
R289	1-247-903-00	CARBON	1M	5% 1/4W	
R299	1-249-425-11	CARBON	4.7K	5% 1/4W	
R401	1-249-417-11	CARBON	1K	5% 1/4W	
R402	1-249-435-11	CARBON	33K	5% 1/4W	
R403	1-249-429-11	CARBON	10K	5% 1/4W	
R404	1-249-437-11	CARBON	47K	5% 1/4W	
R406	1-249-405-11	CARBON	100	5% 1/4W	
R409	1-249-433-11	CARBON	22K	5% 1/4W	
R410	1-249-433-11	CARBON	22K	5% 1/4W	
R411	1-249-429-11	CARBON	10K	5% 1/4W	
R412	1-249-433-11	CARBON	22K	5% 1/4W	
R413	1-249-433-11	CARBON	22K	5% 1/4W	
R414	1-249-433-11	CARBON	22K	5% 1/4W	
R415	1-249-433-11	CARBON	22K	5% 1/4W	
R416	1-249-417-11	CARBON	1K	5% 1/4W	
R417	1-249-417-11	CARBON	1K	5% 1/4W	
R418	1-249-417-11	CARBON	1K	5% 1/4W	
R419	1-249-433-11	CARBON	22K	5% 1/4W	
R422	1-249-412-11	CARBON	390	5% 1/4W	
R423	1-249-412-11	CARBON	390	5% 1/4W	
R424	1-249-412-11	CARBON	390	5% 1/4W	
R425	1-249-412-11	CARBON	390	5% 1/4W	
R426	1-249-412-11	CARBON	390	5% 1/4W	
R427	1-249-411-11	CARBON	330	5% 1/4W	
R428	1-249-412-11	CARBON	390	5% 1/4W	
R429	1-249-412-11	CARBON	390	5% 1/4W	
R430	1-249-415-11	CARBON	680	5% 1/4W	
R442	1-249-418-11	CARBON	1.2K	5% 1/4W	
R443	1-249-409-11	CARBON	220	5% 1/4W	
R444	1-249-441-11	CARBON	100K	5% 1/4W	
R445	1-249-409-11	CARBON	220	5% 1/4W	
R446	1-249-441-11	CARBON	100K	5% 1/4W	
R447	1-247-897-11	CARBON	560K	5% 1/4W	
R448	1-247-897-11	CARBON	560K	5% 1/4W	
R449	1-249-427-11	CARBON	6.8K	5% 1/4W	
R450	1-249-436-11	CARBON	39K	5% 1/4W	
R499	1-249-427-11	CARBON	6.8K	5% 1/4W	
R500	1-249-436-11	CARBON	39K	5% 1/4W	
R601	1-249-405-11	CARBON	100	5% 1/4W	
R602	1-249-417-11	CARBON	1K	5% 1/4W	
R603	1-249-429-11	CARBON	10K	5% 1/4W	
R604	1-249-425-11	CARBON	4.7K	5% 1/4W	
R605	1-249-441-11	CARBON	100K	5% 1/4W	
R606	1-249-405-11	CARBON	100	5% 1/4W	
R607	1-249-409-11	CARBON	220	5% 1/4W	
R608	1-249-409-11	CARBON	220	5% 1/4W	
R609	1-249-409-11	CARBON	220	5% 1/4W	
R610	1-249-409-11	CARBON	220	5% 1/4W	
R611	1-249-421-11	CARBON	2.2K	5% 1/4W	
R612	1-249-423-11	CARBON	3.3K	5% 1/4W	
R613	1-249-441-11	CARBON	100K	5% 1/4W	
R614	1-249-441-11	CARBON	100K	5% 1/4W	
R615	1-249-441-11	CARBON	100K	5% 1/4W	

Ref. No.	Part No.	Description				Remark
R616	1-249-429-11	CARBON	10K	5%	1/4W	
R617	1-249-433-11	CARBON	22K	5%	1/4W	
R618	1-249-425-11	CARBON	4.7K	5%	1/4W	
R619	1-249-429-11	CARBON	10K	5%	1/4W	
R620	1-249-429-11	CARBON	10K	5%	1/4W	
R621	1-249-429-11	CARBON	10K	5%	1/4W	
R622	1-249-429-11	CARBON	10K	5%	1/4W	
R623	1-249-429-11	CARBON	10K	5%	1/4W	
R624	1-249-429-11	CARBON	10K	5%	1/4W	
R625	1-249-429-11	CARBON	10K	5%	1/4W	
R626	1-249-429-11	CARBON	10K	5%	1/4W	
R627	1-249-425-11	CARBON	4.7K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-249-425-11	CARBON	4.7K	5%	1/4W	
R630	1-249-425-11	CARBON	4.7K	5%	1/4W	
R631	1-249-425-11	CARBON	4.7K	5%	1/4W	
R632	1-249-425-11	CARBON	4.7K	5%	1/4W	
R633	1-249-425-11	CARBON	4.7K	5%	1/4W	
R634	1-249-425-11	CARBON	4.7K	5%	1/4W	
R635	1-249-429-11	CARBON	10K	5%	1/4W	
R636	1-249-441-11	CARBON	100K	5%	1/4W	
R637	1-249-441-11	CARBON	100K	5%	1/4W	
R638	1-249-441-11	CARBON	100K	5%	1/4W	
R639	1-249-441-11	CARBON	100K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV231	1-223-251-11	RES, VAR, CARBON	100K/100K (DBS LEVEL)			
RV232	1-223-251-11	RES, VAR, CARBON	100K/100K (FREQUENCY (Hz))			
RV241	1-223-253-11	RES, VAR, CARBON	100K/100K (BALANCE)			
		< SWITCH >				
S401	1-554-303-21	SWITCH, TACTILE (FLAT)				
S402	1-554-303-21	SWITCH, TACTILE (REVERSE)				
S403	1-554-303-21	SWITCH, TACTILE (EFFECT)				
S404	1-554-303-21	SWITCH, TACTILE (EQ REC)				
S406	1-554-303-21	SWITCH, TACTILE (VIDEO)				
S407	1-554-303-21	SWITCH, TACTILE (TAPE)				
S408	1-554-303-21	SWITCH, TACTILE (CD)				
S409	1-554-303-21	SWITCH, TACTILE (TUNER)				
S410	1-554-303-21	SWITCH, TACTILE (PHONO)				
S411	1-554-303-21	SWITCH, TACTILE (SURROUND)				
S412	1-554-303-21	SWITCH, TACTILE (UP)				
S413	1-554-303-21	SWITCH, TACTILE (LEFT)				
S414	1-554-303-21	SWITCH, TACTILE (RIGHT)				
S415	1-554-303-21	SWITCH, TACTILE (DOWN)				
S416	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S417	1-554-303-21	SWITCH, TACTILE (PERSONAL FILE)				
S418	1-554-303-21	SWITCH, TACTILE (DISPLAY)				
S419	1-554-303-21	SWITCH, TACTILE (HALL/1)				
S420	1-554-303-21	SWITCH, TACTILE (DANCE/2)				
S421	1-554-303-21	SWITCH, TACTILE (MOVIE/3)				
S422	1-554-303-21	SWITCH, TACTILE (WM/4)				
S423	1-554-303-21	SWITCH, TACTILE (CAR/5)				
S424	1-554-303-21	SWITCH, TACTILE (DBS ON/OFF)				
S601	1-554-303-21	SWITCH, TACTILE (1)				
S602	1-554-303-21	SWITCH, TACTILE (2)				
S603	1-554-303-21	SWITCH, TACTILE (3)				
S604	1-554-303-21	SWITCH, TACTILE (4)				
S605	1-554-303-21	SWITCH, TACTILE (5)				
S606	1-554-303-21	SWITCH, TACTILE (6)				
S607	1-554-303-21	SWITCH, TACTILE (7)				
S608	1-554-303-21	SWITCH, TACTILE (8)				
S609	1-554-303-21	SWITCH, TACTILE (9)				
S610	1-554-303-21	SWITCH, TACTILE (0)				
S611	1-554-303-21	SWITCH, TACTILE (UP)				
S612	1-554-303-21	SWITCH, TACTILE (DOWN)				
S613	1-554-303-21	SWITCH, TACTILE (SHIFT)				
S614	1-554-303-21	SWITCH, TACTILE (BAND SELECT)				
S615	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S616	1-554-303-21	SWITCH, TACTILE (ONCE)				
S617	1-554-303-21	SWITCH, TACTILE (DAILY)				
S618	1-554-303-21	SWITCH, TACTILE (NEXT)				
S619	1-554-303-21	SWITCH, TACTILE (CLOCK)				
S620	1-554-303-21	SWITCH, TACTILE (SLEEP)				
S621	1-554-303-21	SWITCH, TACTILE (CONTROL)				
S622	1-554-303-21	SWITCH, TACTILE (CLEAR)				
S623	1-554-303-21	SWITCH, TACTILE (BACK)				
S624	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)				
S625	1-554-303-21	SWITCH, TACTILE (DISPLAY)				
S626	1-554-303-21	SWITCH, TACTILE (ST/MUTE)				
S627	1-554-303-21	SWITCH, TACTILE (TIMER MODE)				
S628	1-554-303-21	SWITCH, TACTILE (CHARACTER)				
		< VIBRATOR >				
X601	1-579-564-21	VIBRATOR, CRYSTAL (8.388608MHz)				
**********						
*	A-4360-816-A	POLAR BOARD, COMPLETE (D309:CIS)				
		**********				
		< CAPACITOR >				
C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1702	1-104-294-11	POLYSTYRENE	470PF	5%	50V	
C1703	1-124-902-00	ELECT	0.47uF	20%	50V	
C1704	1-124-902-00	ELECT	0.47uF	20%	50V	
C1705	1-164-098-11	CERAMIC	0.047uF		12V	
C1706	1-124-903-11	ELECT	1uF	20%	50V	

POLAR **POWER**

Ref. No.	Part No.	Description				Remark
C1707	1-162-288-31	CERAMIC	330PF	10%	50V	
C1708	1-124-903-11	ELECT	1uF	20%	50V	
C1709	1-124-903-11	ELECT	1uF	20%	50V	
C1710	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1710	1-137-364-91	FILM	0.001uF	5%	50V	
C1711	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1711	1-137-364-91	FILM	0.001uF	5%	50V	
C1712	1-130-736-11	FILM	0.01uF	5%	50V	
C1713	1-130-736-11	FILM	0.01uF	5%	50V	
C1714	1-124-903-11	ELECT	1uF	20%	50V	
C1715	1-124-903-11	ELECT	1uF	20%	50V	
C1716	1-124-903-11	ELECT	1uF	20%	50V	
C1717	1-162-291-31	CERAMIC	560PF	10%	50V	
C1718	1-162-291-31	CERAMIC	560PF	10%	50V	
C1719	1-124-477-11	ELECT	47uF	20%	25V	
C1720	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1721	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1722	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1723	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1724	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1725	1-124-477-11	ELECT	47uF	20%	25V	
C1726	1-124-903-11	ELECT	1uF	20%	50V	
C1727	1-124-903-11	ELECT	1uF	20%	50V	
C1728	1-124-034-51	ELECT	33uF	20%	16V	
C1729	1-124-907-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
* CN1701	1-568-832-11	SOCKET, CONNECTOR 13P				
		< DIODE >				
D1701	8-719-987-63	DIODE	1N4148M			
D1702	8-719-987-63	DIODE	1N4148M			
D1703	8-719-987-63	DIODE	1N4148M			
D1704	8-719-987-63	DIODE	1N4148M			
D1705	8-719-987-63	DIODE	1N4148M			
		< IC >				
IC1701	8-759-063-04	IC	IR3R42			
IC1702	8-759-634-51	IC	M5218AP			
IC1703	8-759-140-53	IC	MC14053BCP			
		< COIL >				
L1701	1-409-497-11	COIL (FILTER)				
		< TRANSISTOR >				
Q1701	8-729-900-61	TRANSISTOR	DTA114ES			
Q1702	8-729-900-80	TRANSISTOR	DTC114ES			
Q1703	8-729-900-80	TRANSISTOR	DTC114ES			
Q1704	8-729-900-80	TRANSISTOR	DTC114ES			
Q1705	8-729-900-61	TRANSISTOR	DTA114ES			

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R1701	1-249-432-11	CARBON	18K	5%	1/4W	
R1702	1-249-435-11	CARBON	33K	5%	1/4W	
R1703	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1704	1-247-858-11	CARBON	13K	5%	1/4W	
R1705	1-249-417-11	CARBON	1K	5%	1/4W	
R1706	1-249-417-11	CARBON	1K	5%	1/4W	
R1707	1-249-441-11	CARBON	100K	5%	1/4W	
R1708	1-249-440-11	CARBON	82K	5%	1/4W	
R1709	1-249-439-11	CARBON	68K	5%	1/4W	
R1710	1-249-439-11	CARBON	68K	5%	1/4W	
R1711	1-249-439-11	CARBON	68K	5%	1/4W	
R1712	1-247-878-00	CARBON	91K	5%	1/4W	
R1713	1-247-878-00	CARBON	91K	5%	1/4W	
R1714	1-249-441-11	CARBON	100K	5%	1/4W	
R1715	1-249-441-11	CARBON	100K	5%	1/4W	
R1716	1-249-441-11	CARBON	100K	5%	1/4W	
R1717	1-249-441-11	CARBON	100K	5%	1/4W	
R1718	1-249-429-11	CARBON	10K	5%	1/4W	
R1719	1-249-429-11	CARBON	10K	5%	1/4W	
R1720	1-249-429-11	CARBON	10K	5%	1/4W	
R1721	1-249-434-11	CARBON	27K	5%	1/4W	
R1722	1-249-441-11	CARBON	100K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV1701	1-238-601-11	RES, ADJ, CARBON	22K			
RV1702	1-238-599-11	RES, ADJ, CARBON	4.7K			
		< SWITCH >				
S1701	1-571-303-11	SWITCH, SLIDE				
		< TEST PIN >				
* TP1701	1-560-061-00	PIN, CONNECTOR 3P				
* TP1702	1-560-061-00	PIN, CONNECTOR 3P				
**********						
*	A-4356-906-A	POWER BOARD, COMPLETE (D309)				
		**********				
*	A-4356-987-A	POWER BOARD, COMPLETE (D359:AEP, IT)				
		**********				
*	A-4356-993-A	POWER BOARD, COMPLETE (D359:UK)				
		**********				
*	A-4360-001-A	POWER BOARD, COMPLETE (A37)				
		**********				
		< CAPACITOR >				
⚠C1	1-161-744-00	CERAMIC	0.01uF		400V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description				Remark
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C803	1-124-907-11	ELECT	10uF	20%	50V	
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C805	1-124-463-00	ELECT	0.1uF	20%	50V	
C806	1-124-360-00	ELECT	1000uF	20%	16V	(D309, D359)
C806	1-124-557-11	ELECT	1000uF	20%	25V	(A37)
C807	1-136-165-00	FILM	0.1uF	5%	50V	
C811	1-124-910-11	ELECT	47uF	20%	50V	
C812	1-124-907-11	ELECT	10uF	20%	50V	
C813	1-124-122-11	ELECT	100uF	20%	50V	
		< CONNECTOR >				
* CN1	1-564-321-00	PIN, CONNECTOR 2P				
* CN802	1-568-934-11	PIN, CONNECTOR 7P				
* CN803	1-568-951-11	PIN, CONNECTOR 2P				
		< DIODE >				
D801	8-719-987-63	DIODE	1N4148M			
D802	8-719-200-82	DIODE	11ES2			
D803	8-719-200-82	DIODE	11ES2			
D804	8-719-200-82	DIODE	11ES2			
D805	8-719-200-82	DIODE	11ES2			
D806	8-719-987-63	DIODE	1N4148M			
D811	8-719-014-66	DIODE	UZP-5.6B			
D812	8-719-002-60	DIODE	UZL-33L			
D813	8-719-200-82	DIODE	11ES2			
D821	8-719-987-63	DIODE	1N4148M			
		< IC >				
IC801	8-759-820-13	IC	L78MR06			
		< TRANSISTOR >				
Q811	8-729-141-83	TRANSISTOR	2SB1094-LK			
Q821	8-729-119-78	TRANSISTOR	2SC2785-HFE			(D309)
Q821	8-729-620-05	TRANSISTOR	2SC2603-EF			(A37/D359)
Q822	8-729-119-78	TRANSISTOR	2SC2785-HFE			(D309)
Q822	8-729-620-05	TRANSISTOR	2SC2603-EF			(A37/D359)
		< RESISTOR >				
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R803	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R811	1-249-425-11	CARBON	4.7K	5%	1/4W	
R812	1-249-421-11	CARBON	2.2K	5%	1/4W	
⚠R813	1-212-934-00	FUSIBLE	1	5%	1/2W	F
R821	1-249-433-11	CARBON	22K	5%	1/4W	
R822	1-249-433-11	CARBON	22K	5%	1/4W	

Ref.No.	Part No.	Description				Remark
		< RELAY >				
RY1	1-515-738-11	RELAY, POWER				
**********						
*	A-4356-905-A	POWER AMPLIFIER BOARD, COMPLETE				
		**********				
						(D309:AEP, EE, CIS)
*	A-4356-986-A	POWER AMPLIFIER BOARD, COMPLETE				
		**********				
						(D359:AEP)
*	A-4360-002-A	POWER AMPLIFIER BOARD, COMPLETE (A37)				
		**********				
*	A-4360-132-A	POWER AMPLIFIER BOARD, COMPLETE				
		**********				
						(D309:G, IT)
*	A-4360-506-A	POWER AMPLIFIER BOARD, COMPLETE				
		**********				
						(D359:IT)
*	A-4360-992-A	POWER AMPLIFIER BOARD, COMPLETE				
		**********				
						(D359:UK)
		< CAPACITOR >				
C701	1-124-927-11	ELECT	4.7uF	20%	100V	
C702	1-110-337-51	MYLAR	150PF	5%	50V	
C703	1-110-339-11	MYLAR	220PF	5%	50V	
C704	1-124-910-11	ELECT	47uF	20%	50V	
C705	1-124-910-11	ELECT	47uF	20%	50V	
C706	1-124-916-11	ELECT	22uF	20%	63V	
C709	1-124-122-11	ELECT	100uF	20%	50V	
C710	1-136-165-00	FILM	0.1uF	5%	50V	
C711	1-136-163-00	FILM	0.068uF	5%	50V	
C712	1-136-163-00	FILM	0.068uF	5%	50V	
C713	1-164-159-11	CERAMIC	0.1uF		50V	
C714	1-124-910-11	ELECT	47uF	20%	50V	
C745	1-164-081-11	CERAMIC	470PF	10%	50V	(D309:G, IT/D359:IT)
C746	1-162-290-31	CERAMIC	470PF	10%	50V	(D309:G, IT/D359:IT)
C751	1-124-927-11	ELECT	4.7uF	20%	100V	
C752	1-110-337-51	MYLAR	150PF	5%	50V	
C753	1-110-339-11	MYLAR	220PF	5%	50V	
C754	1-124-910-11	ELECT	47uF	20%	50V	
C755	1-124-910-11	ELECT	47uF	20%	50V	
C759	1-124-122-11	ELECT	100uF	20%	50V	
C760	1-136-165-00	FILM	0.1uF	5%	50V	
C761	1-136-163-00	FILM	0.068uF	5%	50V	
C762	1-136-163-00	FILM	0.068uF	5%	50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER AMPLIFIER

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN241	1-564-518-11	PLUG, CONNECTOR 3P	
		< DIODE >	
D701	8-719-987-63	DIODE 1N4148M	
D751	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC701	8-749-920-22	IC STK-4172MK2K (A37)	
IC701	8-749-920-09	IC STK-4152MK2K (D309/D359)	
		< COIL >	
L701	1-420-872-00	COIL, AIR CORE	
L751	1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q701	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q751	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
		< RESISTOR >	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-438-11	CARBON 56K 5% 1/4W	
R703	1-249-414-11	CARBON 560 5% 1/4W	
R704	1-249-438-11	CARBON 56K 5% 1/4W	
R705	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R705	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R706	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R706	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R707	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R707	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R708	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R708	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R709	1-249-421-11	CARBON 2.2K 5% 1/4W	
R710	1-249-421-11	CARBON 2.2K 5% 1/4W	
⚠R711	1-212-881-11	FUSIBLE 100 5% 1/4W F	
⚠R712	1-217-151-00	METAL PLATE 0.22 2W	
R713	1-249-397-11	CARBON 22 5% 1/4W	
R714	1-249-397-11	CARBON 22 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-431-11	CARBON 15K 5% 1/4W	
R717	1-249-441-11	CARBON 100K 5% 1/4W	
R718	1-249-397-11	CARBON 22 5% 1/4W	
R719	1-249-397-11	CARBON 22 5% 1/4W	
R720	1-249-429-11	CARBON 10K 5% 1/4W	
R721	1-247-881-00	CARBON 120K 5% 1/4W	
R722	1-249-437-11	CARBON 47K 5% 1/4W	
R723	1-249-439-11	CARBON 68K 5% 1/4W	
R724	1-249-417-11	CARBON 1K 5% 1/4W	
R725	1-249-433-11	CARBON 22K 5% 1/4W	
R726	1-249-433-11	CARBON 22K 5% 1/4W	
R727	1-249-426-11	CARBON 5.6K 5% 1/4W	
⚠R739	1-249-383-81	CARBON 1.5 5% 1/4W F	
R751	1-249-417-11	CARBON 1K 5% 1/4W	
R752	1-249-438-11	CARBON 56K 5% 1/4W	
R753	1-249-414-11	CARBON 560 5% 1/4W	
R754	1-249-438-11	CARBON 56K 5% 1/4W	
R755	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R755	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R756	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R756	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R757	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R757	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R758	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R758	1-249-427-11	CARBON 6.8K 5% 1/4W	(A37)
R759	1-249-421-11	CARBON 2.2K 5% 1/4W	
R760	1-249-421-11	CARBON 2.2K 5% 1/4W	
⚠R761	1-212-881-11	FUSIBLE 100 5% 1/4W F	
⚠R762	1-217-151-00	METAL PLATE 0.22 2W	
R763	1-249-397-11	CARBON 22 5% 1/4W	
R764	1-249-397-11	CARBON 22 5% 1/4W	
R765	1-249-417-11	CARBON 1K 5% 1/4W	
R766	1-249-431-11	CARBON 15K 5% 1/4W	
R767	1-249-441-11	CARBON 100K 5% 1/4W	
R768	1-249-397-11	CARBON 22 5% 1/4W	
R769	1-249-397-11	CARBON 22 5% 1/4W	

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description			Remark
*	A-4356-901-A	ST MAIN BOARD, COMPLETE (D309:AEP)			
		**********			
*	A-4356-982-A	ST MAIN BOARD, COMPLETE (D359:AEP)			
		**********			
*	A-4356-989-A	ST MAIN BOARD, COMPLETE (D359:UK)			
		**********			
*	A-4356-998-A	ST MAIN BOARD, COMPLETE (A37)			
		**********			
*	A-4360-123-A	ST MAIN BOARD, COMPLETE (D309:G, IT)			
		**********			
*	A-4360-503-A	ST MAIN BOARD, COMPLETE (D359:IT)			
		**********			
*	A-4360-814-A	ST MAIN BOARD, COMPLETE (D309:EE)			
		**********			
*	A-4360-817-A	ST MAIN BOARD, COMPLETE (D309:CIS)			
		**********			
		< CAPACITOR >			
C202	1-110-339-11	MYLAR	220PF	5%	50V
C203	1-130-471-00	MYLAR	0.001uF	5%	50V
C204	1-124-907-11	ELECT	10uF	20%	50V
C205	1-124-907-11	ELECT	10uF	20%	50V
C206	1-136-163-00	FILM	0.068uF	5%	50V
C207	1-124-903-11	ELECT	1uF	20%	50V
C208	1-136-158-00	FILM	0.027uF	5%	50V
C209	1-124-902-00	ELECT	0.47uF	20%	50V
C210	1-136-153-00	FILM	0.01uF	5%	50V
C211	1-136-168-00	FILM	0.18uF	5%	50V
C212	1-130-478-00	MYLAR	0.0039uF	5%	50V
C213	1-136-163-00	FILM	0.068uF	5%	50V
C214	1-130-474-00	MYLAR	0.0018uF	5%	50V
C215	1-136-159-00	FILM	0.033uF	5%	50V
C216	1-130-469-00	MYLAR	680PF	5%	50V
C217	1-136-154-00	FILM	0.012uF	5%	50V
C218	1-110-340-11	MYLAR	270PF	5%	50V
C219	1-130-479-00	MYLAR	0.0047uF	5%	50V
C220	1-124-916-11	ELECT	22uF	20%	63V
C221	1-164-159-11	CERAMIC	0.1uF		50V
C222	1-164-159-11	CERAMIC	0.1uF		50V
C223	1-164-159-11	CERAMIC	0.1uF		50V
C252	1-110-339-11	MYLAR	220PF	5%	50V
C253	1-130-471-00	MYLAR	0.001uF	5%	50V
C254	1-124-907-11	ELECT	10uF	20%	50V
C255	1-124-907-11	ELECT	10uF	20%	50V
C256	1-136-163-00	FILM	0.068uF	5%	50V
C257	1-124-903-11	ELECT	1uF	20%	50V
C258	1-136-158-00	FILM	0.027uF	5%	50V
C259	1-124-902-00	ELECT	0.47uF	20%	50V
C260	1-136-153-00	FILM	0.01uF	5%	50V
C261	1-136-168-00	FILM	0.18uF	5%	50V
C262	1-130-478-00	MYLAR	0.0039uF	5%	50V
C263	1-136-163-00	FILM	0.068uF	5%	50V
C264	1-130-474-00	MYLAR	0.0018uF	5%	50V
C265	1-136-159-00	FILM	0.033uF	5%	50V
C266	1-130-469-00	MYLAR	680PF	5%	50V
C267	1-136-154-00	FILM	0.012uF	5%	50V
C268	1-110-340-11	MYLAR	270PF	5%	50V
C269	1-130-479-00	MYLAR	0.0047uF	5%	50V
C270	1-124-916-11	ELECT	22uF	20%	63V
C301	1-161-379-00	CERAMIC	0.01uF	20%	25V (D309:G, IT/D359:IT)
C302	1-124-477-11	ELECT	47uF	20%	25V
C303	1-161-379-00	CERAMIC	0.01uF	20%	25V
C305	1-161-379-00	CERAMIC	0.01uF	20%	25V (D309:G, IT/D359:IT)
C306	1-161-379-00	CERAMIC	0.01uF	20%	25V (D309:G, IT/D359:IT)
C307	1-161-379-00	CERAMIC	0.01uF	20%	25V
C308	1-161-379-00	CERAMIC	0.01uF	20%	25V
C309	1-161-379-00	CERAMIC	0.01uF	20%	25V
C310	1-124-477-11	ELECT	47uF	20%	25V
C311	1-161-379-00	CERAMIC	0.01uF	20%	25V
C312	1-101-006-00	CERAMIC	0.047uF		50V
C313	1-123-382-00	ELECT	3.3uF	20%	100V
C314	1-161-379-00	CERAMIC	0.01uF	20%	25V
C315	1-161-329-00	CERAMIC	0.0068uF	30%	16V
C316	1-162-282-31	CERAMIC	100PF	10%	50V
C317	1-162-292-31	CERAMIC	680PF	10%	50V (D309:G, IT/D359:IT)
C318	1-124-903-11	ELECT	1uF	20%	50V
C320	1-124-903-11	ELECT	1uF	20%	50V
C321	1-124-902-00	ELECT	0.47uF	20%	50V
C322	1-124-463-00	ELECT	0.1uF	20%	50V
C323	1-161-329-00	CERAMIC	0.0068uF	20%	16V
C324	1-161-329-00	CERAMIC	0.0068uF	20%	16V
C325	1-124-477-11	ELECT	47uF	20%	25V
C326	1-124-907-11	ELECT	10uF	20%	50V
C327	1-161-379-00	CERAMIC	0.01uF	20%	25V
C328	1-124-463-00	ELECT	0.1uF	20%	50V
C329	1-124-927-11	ELECT	4.7uF	20%	100V
C330	1-161-379-00	CERAMIC	0.01uF	20%	25V
C331	1-126-176-11	ELECT	220uF	20%	10V
C332	1-161-379-00	CERAMIC	0.01uF	20%	25V
C335	1-161-379-00	CERAMIC	0.01uF	20%	25V
C336	1-161-379-00	CERAMIC	0.01uF	20%	25V
C339	1-162-210-31	CERAMIC	30PF	5%	50V (D309:AEP, EE, CIS/D359:AEP, UK)
C341	1-123-382-00	ELECT	3.3uF	20%	100V

ST MAIN

Ref.No.	Part No.	Description	Remark
C342	1-123-382-00	ELECT 3.3uF 20% 100V	
C343	1-123-382-00	ELECT 3.3uF 20% 100V	
C344	1-123-382-00	ELECT 3.3uF 20% 100V	
C345	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C346	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C351	1-161-494-00	CERAMIC 0.022uF 25V (D309:AEP, EE, CIS/D359:AEP, UK)	
C352	1-102-120-00	CERAMIC 0.0018uF 10% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
C353	1-161-374-11	CERAMIC 0.0015uF 20% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
C354	1-161-494-00	CERAMIC 0.022uF 25V (D309:AEP, EE, CIS/D359:AEP, UK)	
C361	1-164-098-11	CERAMIC 0.047uF 12V	
C362	1-161-494-00	CERAMIC 0.022uF 25V	
C363	1-164-159-11	CERAMIC 0.1uF 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
C364	1-161-494-00	CERAMIC 0.022uF 25V (D309:AEP, EE, CIS/D359:AEP, UK)	
C371	1-162-196-31	CERAMIC 5.6PF 10% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
C371	1-162-198-31	CERAMIC 8.2PF 10% 50V (A37/D309:G, IT/D359:IT)	
C373	1-162-288-31	CERAMIC 330PF 10% 50V (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
C501	1-102-961-00	CERAMIC 27PF 5% 50V	
C502	1-102-961-00	CERAMIC 27PF 5% 50V	
C503	1-124-477-11	ELECT 47uF 20% 25V	
C504	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C505	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C506	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C507	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C521	1-124-925-11	ELECT 2.2uF 20% 100V	
C522	1-124-463-00	ELECT 0.1uF 20% 50V	
C523	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C524	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C525	1-124-477-11	ELECT 47uF 20% 25V (A37/D309:AEP, G, IT/D359)	
C525	1-126-101-11	ELECT 100uF 20% 16V (D309:EE, CIS)	
C531	1-136-173-00	FILM 0.47uF 5% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
C532	1-161-494-00	CERAMIC 0.022uF 25V (D309:AEP, EE, CIS/D359:AEP, UK)	
C533	1-124-463-00	ELECT 0.1uF 20% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
		< FILTER >	
CF301	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
CF301	1-577-070-81	FILTER, CERAMIC (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
CF302	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
CF303	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
CF303	1-577-070-81	FILTER, CERAMIC (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
CF304	1-577-075-11	OSCILLATOR, CERAMIC	
		< CONNECTOR >	
* CN201	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN301	1-568-832-11	SOCKET, CONNECTOR 13P (D309:CIS)	
* CN501	1-568-828-11	SOCKET, CONNECTOR 9P	
CNJ131	1-695-095-11	SOCKET, CONNECTOR 13P	
CNJ132	1-750-179-11	SOCKET, CONNECTOR 5P	
		< COMPOSITION CIRCUIT BLOCK >	
CP201	1-239-053-11	COMPOSITION CIRCUIT BLOCK	
CP251	1-239-053-11	COMPOSITION CIRCUIT BLOCK	
		< DIODE >	
D351	8-719-987-63	DIODE 1N4148M (D309:AEP, EE, CIS/D359:AEP, UK)	
D391	8-719-987-63	DIODE 1N4148M (D309:CIS)	
D392	8-719-987-63	DIODE 1N4148M (D309:CIS)	
		< FRONT END >	
FE301	1-463-857-21	FRONT END (FM) (D309:G, IT/D359:IT)	
FE301	1-465-006-11	FRONT END (FM) (2 GANG) (D359:UK)	
FE301	1-465-396-11	FRONT END (FM 3GANG) (D309:EE, CIS)	
FE301	1-693-090-21	FRONT END (FM) (2 GANG) (A37/D309:AEP/D359:AEP)	
FE351	1-236-463-11	ENCAPSULATED COMPONENT (D309:AEP, EE, CIS/D359:AEP, UK)	
FE352	1-239-260-11	ENCAPSULATED COMPONENT (A37/D309:G, IT/D359:IT)	
FE352	1-239-261-12	ENCAPSULATED COMPONENT (D309:AEP, EE, CIS/D359:AEP, UK)	
		< IC >	
IC201	8-759-633-78	IC M5289P	
IC202	8-759-804-49	IC LC7522 (A37/D359)	
IC202	8-759-822-26	IC LC7522K (D309)	
IC251	8-759-633-78	IC M5289P	
IC301	8-759-821-45	IC LA1851N	
IC501	8-759-820-91	IC LC7218	
		< IFT >	
IFT301	1-404-713-11	TRANSFORMER, IF	
		< COIL >	
L301	1-410-686-11	INDUCTOR 1mH (A37/D309:G, IT/D359:IT)	
L301	1-407-500-00	INDUCTOR 4.7mH (D309:AEP, EE, CIS/D359:AEP, UK)	

Ref. No.	Part No.	Description	Remark
L351	1-410-525-11	INDUCTOR 220uH (D309:AEP, EE, CIS/D359:AEP, UK)	
		< FILTER >	
LPF301	1-235-164-00	FILTER, LOW PASS	
LPF302	1-235-164-00	FILTER, LOW PASS	
		< TRANSISTOR >	
Q301	8-729-230-99	TRANSISTOR 2SC2669-OY (D309:G, IT/D359:IT)	
Q302	8-729-230-99	TRANSISTOR 2SC2669-OY (D309:G, IT/D359:IT)	
Q303	8-729-230-XX	TRANSISTOR 2SC2669-OY	
Q304	8-729-230-XX	TRANSISTOR 2SC2669-OY	
Q305	8-729-900-80	TRANSISTOR DTC114ES	
Q306	8-729-900-61	TRANSISTOR DTA114ES	
Q307	8-729-900-80	TRANSISTOR DTC114ES	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q308	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q309	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q351	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)	
Q352	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309:AEP, EE, CIS)	
Q352	8-729-620-05	TRANSISTOR 2SC2603-EF (D359:AEP, UK)	
Q353	8-729-119-76	TRANSISTOR 2SA1175-HFE (D309:AEP, EE, CIS/D359:AEP, UK)	
Q354	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)	
Q355	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)	
Q356	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)	
Q501	8-729-900-80	TRANSISTOR DTC114ES	
Q502	8-729-900-61	TRANSISTOR DTA114ES	
Q521	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q522	8-729-201-84	TRANSISTOR 2SC3112-B	
Q531	8-729-202-67	TRANSISTOR 2SK246-GR3 (D309:AEP, EE, CIS/D359:AEP, UK)	
Q532	8-729-201-84	TRANSISTOR 2SC3112-B (D309:AEP, EE, CIS/D359:AEP, UK)	
		< RESISTOR >	
R201	1-249-427-11	CARBON 6.8K 5% 1/4W	
R202	1-249-441-11	CARBON 100K 5% 1/4W	
R203	1-249-427-11	CARBON 6.8K 5% 1/4W	
R211	1-249-417-11	CARBON 1K 5% 1/4W	
R212	1-249-417-11	CARBON 1K 5% 1/4W	
R251	1-249-427-11	CARBON 6.8K 5% 1/4W	
R252	1-249-441-11	CARBON 100K 5% 1/4W	
R253	1-249-427-11	CARBON 6.8K 5% 1/4W	
R301	1-249-401-11	CARBON 47 5% 1/4W	
R302	1-249-405-11	CARBON 100 5% 1/4W (D309:G, IT/D359:IT)	
R302	1-249-407-11	CARBON 150 5% 1/4W (A37/D309:AEP/D359:AEP)	
R302	1-249-413-11	CARBON 470 5% 1/4W (D309:EE, CIS/D359:UK)	
R303	1-249-411-11	CARBON 330 5% 1/4W (D309:G, IT/D359:IT)	
R304	1-249-432-11	CARBON 18K 5% 1/4W (D309:G, IT/D359:IT)	
R305	1-249-411-11	CARBON 330 5% 1/4W (D309:G, IT/D359:IT)	
R306	1-249-434-11	CARBON 27K 5% 1/4W (D309:G, IT/D359:IT)	
R307	1-249-414-11	CARBON 560 5% 1/4W (D309:G, IT/D359:IT)	
R308	1-249-411-11	CARBON 330 5% 1/4W	
R309	1-249-432-11	CARBON 18K 5% 1/4W	
R310	1-249-411-11	CARBON 330 5% 1/4W	
R311	1-249-434-11	CARBON 27K 5% 1/4W	
R312	1-249-414-11	CARBON 560 5% 1/4W (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
R312	1-249-416-11	CARBON 820 5% 1/4W (D309:G, IT/D359:IT)	
R313	1-249-405-11	CARBON 100 5% 1/4W	
⚠R315	1-249-404-00	CARBON 82 5% 1/4W	
R316	1-249-429-11	CARBON 10K 5% 1/4W	
R317	1-249-417-11	CARBON 1K 5% 1/4W	
R318	1-249-435-11	CARBON 33K 5% 1/4W	
R319	1-249-428-11	CARBON 8.2K 5% 1/4W	
R320	1-249-432-11	CARBON 18K 5% 1/4W	
R321	1-249-423-11	CARBON 3.3K 5% 1/4W	
R322	1-249-429-11	CARBON 10K 5% 1/4W	
R323	1-249-418-11	CARBON 1.2K 5% 1/4W (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
R323	1-249-423-11	CARBON 3.3K 5% 1/4W (D309:G, IT/D359:IT)	
R324	1-249-429-11	CARBON 10K 5% 1/4W	
R325	1-249-429-11	CARBON 10K 5% 1/4W	
R326	1-249-409-11	CARBON 220 5% 1/4W	
R327	1-249-437-11	CARBON 47K 5% 1/4W	
R328	1-249-437-11	CARBON 47K 5% 1/4W	
R329	1-249-437-11	CARBON 47K 5% 1/4W (D309:G, IT/D359:IT)	
R330	1-249-435-11	CARBON 33K 5% 1/4W (D309:G, IT/D359:IT)	
R331	1-247-899-11	CARBON 680K 5% 1/4W	
R332	1-247-899-11	CARBON 680K 5% 1/4W	
R333	1-249-421-11	CARBON 2.2K 5% 1/4W	
R334	1-249-421-11	CARBON 2.2K 5% 1/4W	
R335	1-249-420-11	CARBON 1.8K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

ST MAIN SW

Ref. No.	Part No.	Description	Remark
R336	1-249-420-11	CARBON 1.8K 5% 1/4W	
R337	1-249-426-11	CARBON 5.6K 5% 1/4W	
R338	1-249-426-11	CARBON 5.6K 5% 1/4W	
R351	1-249-433-11	CARBON 22K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R352	1-249-437-11	CARBON 47K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R353	1-247-903-00	CARBON 1M 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R354	1-249-441-11	CARBON 100K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R355	1-249-433-11	CARBON 22K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R356	1-249-421-11	CARBON 2.2K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R361	1-249-437-11	CARBON 47K 5% 1/4W	
R362	1-249-437-11	CARBON 47K 5% 1/4W	
R363	1-249-425-11	CARBON 4.7K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R364	1-249-425-11	CARBON 4.7K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R365	1-249-429-11	CARBON 10K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R366	1-249-413-11	CARBON 470 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R367	1-249-434-11	CARBON 27K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R368	1-249-433-11	CARBON 22K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R370	1-249-423-11	CARBON 3.3K 5% 1/4W (D309:G, IT/D359:IT)	
R501	1-249-417-11	CARBON 1K 5% 1/4W	
R502	1-249-417-11	CARBON 1K 5% 1/4W	
R503	1-249-417-11	CARBON 1K 5% 1/4W	
R504	1-249-417-11	CARBON 1K 5% 1/4W	
R505	1-249-429-11	CARBON 10K 5% 1/4W	
R506	1-249-417-11	CARBON 1K 5% 1/4W	
⚠R510	1-249-401-11	CARBON 47 5% 1/4W	
R511	1-249-429-11	CARBON 10K 5% 1/4W	
R512	1-249-425-11	CARBON 4.7K 5% 1/4W	
R513	1-249-417-11	CARBON 1K 5% 1/4W	
R514	1-249-429-11	CARBON 10K 5% 1/4W	
R515	1-249-417-11	CARBON 1K 5% 1/4W	
R521	1-249-423-11	CARBON 3.3K 5% 1/4W	
R522	1-249-425-11	CARBON 4.7K 5% 1/4W	
R523	1-249-414-11	CARBON 560 5% 1/4W	
R524	1-249-417-11	CARBON 1K 5% 1/4W	
R525	1-249-410-11	CARBON 270 5% 1/4W	
R526	1-249-421-11	CARBON 2.2K 5% 1/4W	
R527	1-249-425-11	CARBON 4.7K 5% 1/4W	
R528	1-249-425-11	CARBON 4.7K 5% 1/4W	
R529	1-249-405-11	CARBON 100 5% 1/4W	
R530	1-249-405-11	CARBON 100 5% 1/4W	
R531	1-249-423-11	CARBON 3.3K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R532	1-249-433-11	CARBON 22K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R533	1-249-414-11	CARBON 560 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R534	1-249-417-11	CARBON 1K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R535	1-249-410-11	CARBON 270 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R536	1-249-421-11	CARBON 2.2K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R537	1-249-425-11	CARBON 4.7K 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
R538	1-249-405-11	CARBON 100 5% 1/4W (D309:AEP, EE, CIS/D359:AEP, UK)	
		< VARIABLE RESISTOR >	
RV301	1-238-601-11	RES, ADJ, CARBON 22K	
RV302	1-238-601-11	RES, ADJ, CARBON 22K	
		< TRASFORMER >	
T301	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T302	1-235-126-00	ENCAPSULATED COMPONENT (D309:G, IT/D359:IT)	
		< TERMINAL >	
TM301	1-537-264-11	TERMINAL BOARD (ANTENNA) (A37/D359:UK)	
* TM301	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL) (ANTENNA) (D309/D359:AEP, IT)	
		< TEST PIN >	
* TP1	1-560-060-00	PIN, CONNECTOR 2P	
		< VIBRATOR >	
XT501	1-577-126-21	VIBRATOR, CRYSTAL (7.2MHz)	
**********			
*	1-646-974-21	SW BOARD (A37)	
		**********	
		< SWITCH >	
⚠SW1	1-572-266-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

REVISED

VOL

Ref. No.	Part No.	Description	Remark
*	1-646-978-11	VOL BOARD (D309)	
		**********	
*	1-646-978-21	VOL BOARD (A37/D359)	
		**********	
		< CAPACITOR >	
C413	1-164-159-11	CERAMIC 0.1uF	50V
		< VARIABLE RESISTOR >	
RV242	1-223-291-11	RES, VAR, CARBON 100K/100K	(VOLUME)
		**********	
		MISCELLANEOUS	
		**********	
16	1-696-986-31	WIRE (FLAT TYPE) (7 CORE)	
17	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
18	1-751-025-11	WIRE (FLAT TYPE) (9 CORE) (A37, D359)	
	1-751-025-31	WIRE (FLAT TYPE) (9 CORE) (A37, D309, D359)	
* 52	1-533-213-11	HOLDER, FUSE (A37/D359)	
	1-533-217-31	HOLDER, FUSE (D309)	
⚠63	1-575-653-11	CORD, POWER (A37:E, PX)	
⚠64	1-690-608-11	CORD, POWER (A37:AUS)	
⚠65	1-696-570-21	CORD, POWER (D359:UK)	
⚠66	1-575-651-11	CORD, POWER	
⚠F801	1-532-078-00	FUSE (1A)	
⚠F802	1-532-078-00	FUSE (1A)	
⚠F803	1-532-299-00	FUSE (5A)	
⚠F804	1-532-299-00	FUSE (5A)	
⚠F805	1-532-286-00	FUSE (2.5A)	
⚠F806	1-532-286-00	FUSE (2.5A)	
FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT	
FL601	1-519-711-11	INDICATOR TUBE, FLUORESCENT	
⚠T1	1-423-646-21	TRANSFORMER, POWER (D359)	
⚠	1-423-646-31	TRANSFORMER, POWER (D309)	
⚠	1-423-647-21	TRANSFORMER, POWER (A37)	
⚠T2	1-423-499-11	TRANSFORMER, POWER (D309)	
⚠	1-423-499-21	TRANSFORMER, POWER (D359)	
⚠	1-423-500-21	TRANSFORMER, POWER (A37)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-466-982-11	COMMANDER, STANDARD (RM-S309) (D309)	
	1-466-982-21	COMMANDER, STANDARD (RM-S309) (A37, D359)	
	1-501-369-11	ANTENNA (D359:AEP, IT)	
	1-501-374-11	ANTENNA, LOOP	(D309:AEP, IT, EE, CIS/D359:AEP, IT)
	1-501-536-11	ANTENNA (D309:AEP, IT, EE, CIS)	
	1-696-860-11	CORD, CONNECTION 13P	(D309:AEP1, IT/D359:AEP1, IT)
*	3-703-713-41	STICKER, SONY SYMBOL (10)	
	3-707-584-01	COVER, BATTERY (A37, D359)	
	3-707-584-21	COVER, BATTERY (D309)	
	3-756-332-11	MANUAL, INSTRUCTION	(ENGLISH, FRENCH, SPANISH, PORTUGUESE) (D309:AEP)
	3-756-332-41	MANUAL, INSTRUCTION	(GERMAN, DUTCH, SWEDISH, ITALIAN) (D309:AEP, IT)
	3-756-332-51	MANUAL, INSTRUCTION	(GERMAN, DUTCH, SWEDISH, ITALIAN) (D359:IT)
	3-756-334-41	MANUAL, INSTRUCTION	(ENGLISH, FRENCH, SPANISH, PORTUGUESE) (D359:AEP)
*	4-957-500-01	INDIVIDUAL CARTON (D309:AEP, IT)	
*	4-957-653-01	INDIVIDUAL CARTON (D309:EE, CIS)	
*	4-958-606-01	CUSHION (D309:AEP, IT, EE, CIS)	
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-682-560-04	SCREW +BVTT 4X6 (S)	(A37, D309:AEP, G, IT, EE, CIS, D359)
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-957-844-11

Sony Corporation
Audio Group

English
93C0973-1
Printed in Japan
© 1993.3
Published by Audio Corporate Planning Group

STR-A37/D309/D359

SONY

SERVICE MANUAL

AEP Model
STR-D309/D359
UK Model
STR-D359
Australian Model
E Model
PX Model
STR-A37

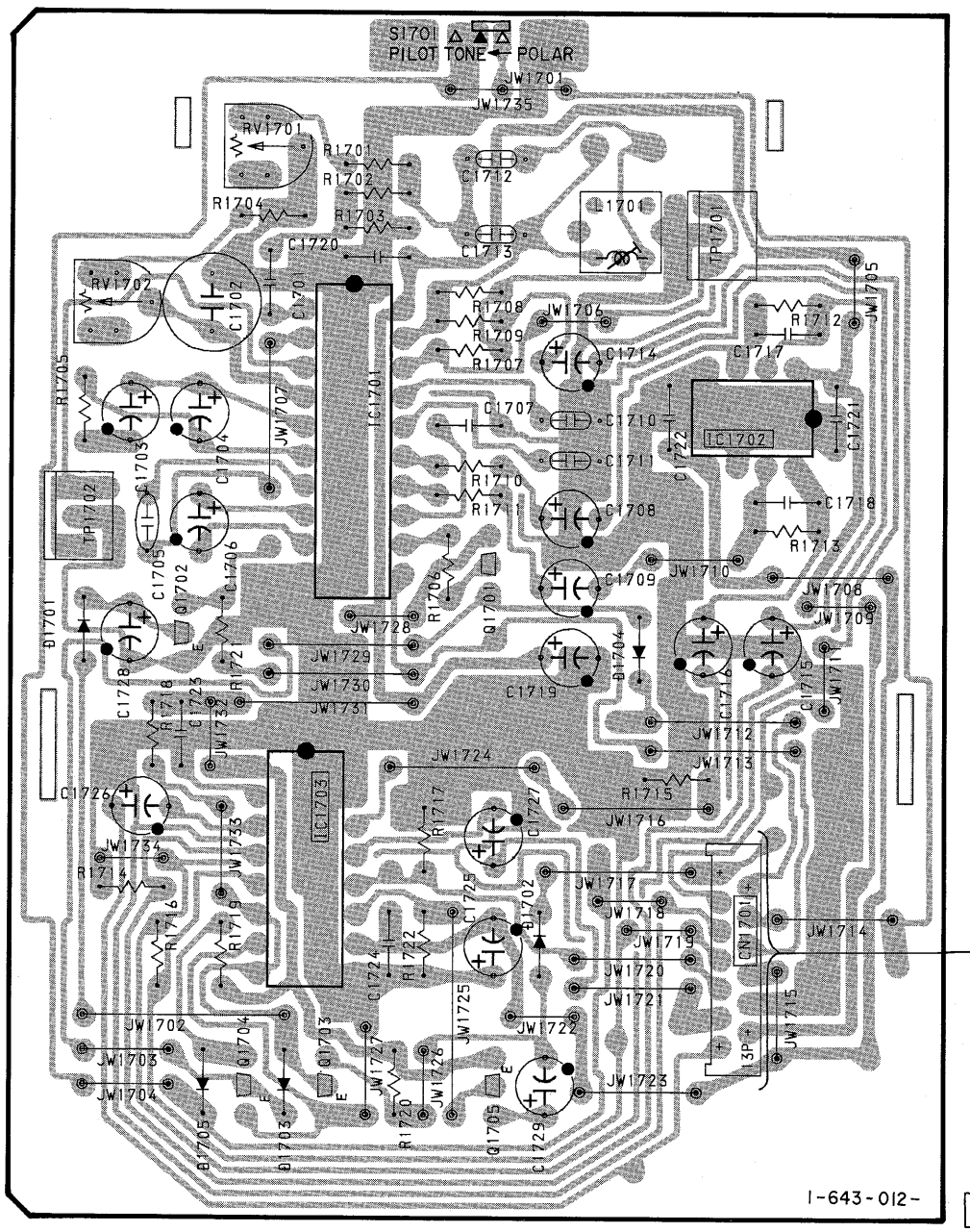
SUPPLEMENT-1

File this Supplement with the Service Manual.

REVISED

Subject : POLAR BOARD
(PRINTED WIRING BOARD)
(CIS Model)
: ELECTRICAL ADJUSTMENTS
~~: Correction~~

【POLAR BOARD】 (CIS model)



09

ST MAIN BOARD
CN301

(Refer to page 14 for Service Manual)

ELECTRICAL ADJUSTMENTS

SUBCARRIER ADJUSTMENT (CIS Model only)

SWITCH POSITION		Function Selector: Radio Band Selector: FM FM mode: Mono			
SIGNAL GENERATOR		69 MHz, 60 dB, FM modulated			
STEP	TEST STAGE	FM TUNING FREQUENCY	SIGNAL GENERATOR	AD-JUST-MENT	REMARKS
1	fo	69 MHz	1 kHz (10 kHz dev.)		The value in this state should be 0 dB (Vo).
2			31.25 kHz (10 kHz dev.)	L1701	Adjust for maximal output.
3	Q			RV1701	Indication is +14 dB against Vo.

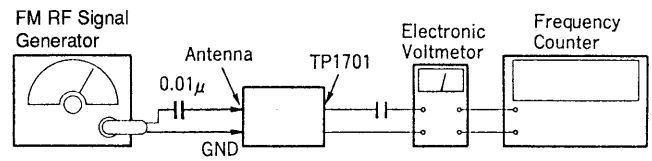


Fig. 1 SUBCARRIER

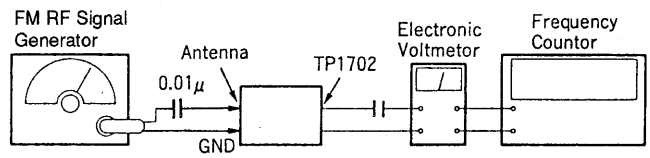
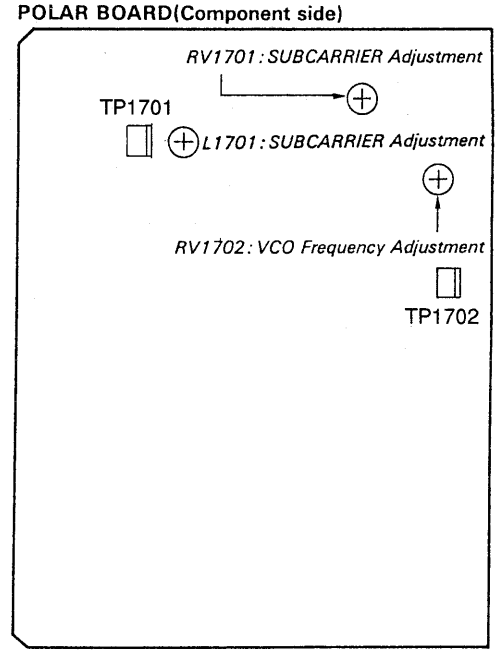


Fig. 2 VCO FREQUENCY

VCO FREQUENCY ADJUSTMENT

SIGNAL GENERATOR	1kHz, 30%, FM modulated (mono signal)		
FREQUENCY	FM TUNING FREQUENCY	AD-JUST-MENT	REMARKS
FM mono position		FM stereo position (unmodulated)	
69 MHz at 60 dB	69 MHz	RV1702	Adjust for 31.25 kHz ±50 Hz.

POLAR BOARD(Component side)



REVISED

• CORRECTION

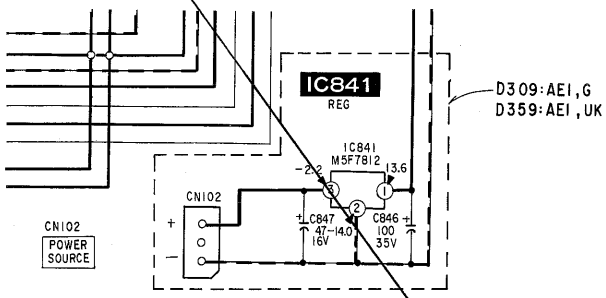
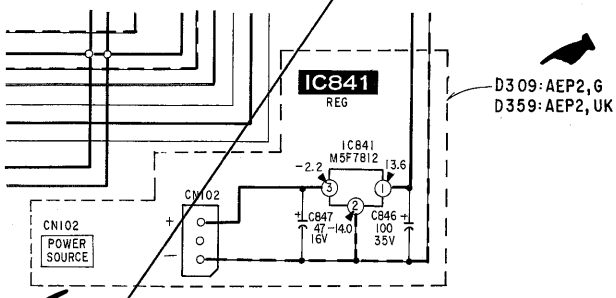
SECTION 3 DIAGRAMS

3-10. SCHEMATIC DIAGRAM

• MAIN SECTION (STR-D309/D359) (Page 29)

☛ : Indicates corrected portion.

AEP2 : AEP with POWER SOURCE
G : German model.

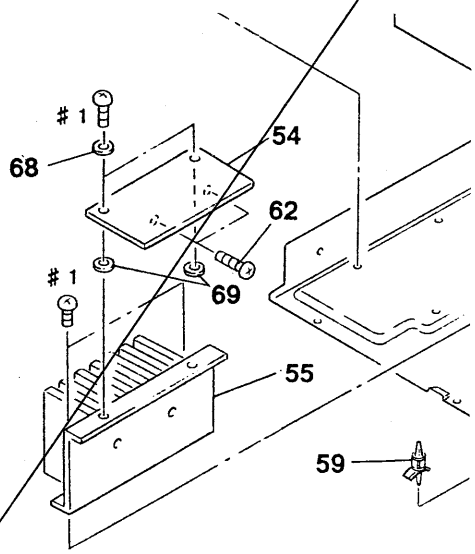
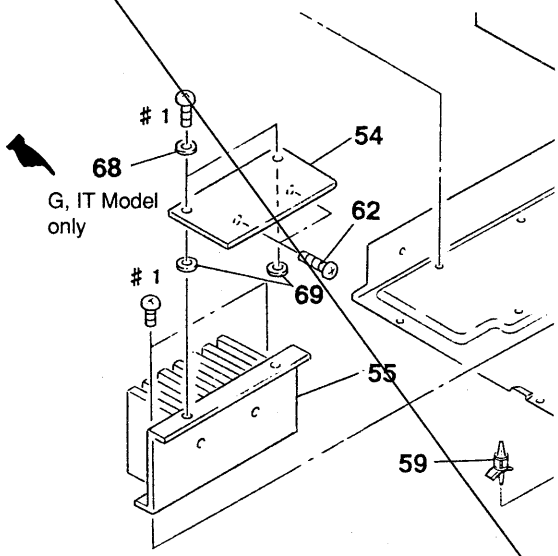
INCORRECT	CORRECT
	
ə Page 12) ə Page 16)	

SECTION 4 EXPLODED VIEWS

4-2. CHASSIS SECTION (page 45)

☛ : Indicates corrected portion.

G : German model.
IT : Italian model.

INCORRECT	CORRECT
	

Ref. No.	Parts No.	Description	Remark
68	4-960-342-21	WASHER (HEAT SINK)	

Ref. No.	Parts No.	Description	Remark
68	4-960-342-21	WASHER (HEAT SINK) (G, IT)	

SECTION 5 ELECTRICAL PARTS LIST

REVISED

☛ : Indicated Corrected portion

AEP1: AEP with out POWER SOURCE
AEP2: AEP with POWER SOURCE
EE: East European model
CIS: CIS model
G: German model
IT: Italian model

PAGE	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
47	*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP)		*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP2)	☛
	*	A-4360-174-A	MAIN BOARD, COMPLETE (D309:EE, CIS)		*	A-4360-174-A	MAIN BOARD, COMPLETE (D309:AEP1, EE, CIS)	☛
	*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP)		*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP2)	☛
					*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP1)	☛
48			< CAPACITOR >				< CAPACITOR >	
	C846	1-124-122-11	ELECT 100uF 20% 50V (D309:AEP, G/D359:AEP, UK)		C846	1-124-122-11	ELECT 100uF 20% 25V (D309:AEP2, G/D359:AEP2, UK)	☛
	C847	1-124-477-11	ELECT 47uF 20% 25V (D309:AEP, G/D359:AEP, UK)		C847	1-124-477-11	ELECT 47uF 20% 25V (D359:AEP2, UK)	☛
					C847	1-124-910-11	ELECT 47uF 20% 50V (D309:AEP2, G)	☛
			< CONNECTOR >				< CONNECTOR >	
	* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (D309:AEP, G/D359:AEP, UK)		* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (D309:AEP2, G/D359:AEP2, UK)	☛
			< IC >				< IC >	
	IC841	8-759-604-39	IC AN6291 (D309:AEP, G/D359:AEP, UK)		IC841	8-759-604-39	IC AN6291 (D309:AEP2, G/D359:AEP2, UK)	☛
49			< RESISTOR >				< RESISTOR >	
	R733	1-249-436-11	CARBON 39K 5% 1/4W		R733	1-249-436-11	CARBON 39K 5% 1/4W (EXCEPT D359:AEP1)	☛
					R733	1-249-437-11	CARBON 47K 5% 1/4W (D359:AEP1)	☛
61			ACCESSORIES & PACKING MATERIALS **********				ACCESSORIES & PACKING MATERIALS **********	
		1-696-860-11	CORD, CONNECTION 13P (D309:AE2, IT, EE, CIS/D359:AE2, IT)			1-696-860-11	CORD, CONNECTION 13P (D309:AEP1, IT/D359:AEP1, IT)	☛

9-957-844-81

Sony Corporation
Audio Group

English
93G0974-1
Printed in Japan
© 1993.7
Published by Audio Sector Quality Assurance Dept.

PS-LX52/LX52P

SERVICE MANUAL
REVISED

US Model
Canadian Model
AEP Model
E Model
Australian Model
PS-LX52
UK Model
PS-LX52P

Photo : PS-LX52

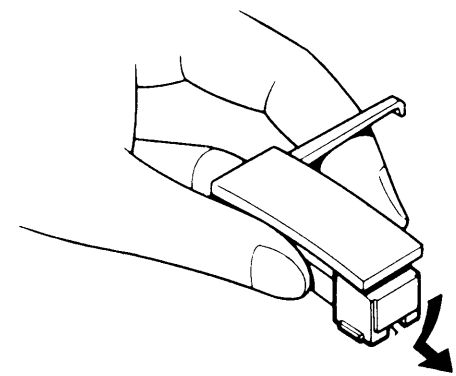
• PS-LX52P is the STEREO TURNTABLE SYSTEM in LBT-D109CD/LBT-A17CD/ LBT-D108CD/LBT-D159CD/LBT-D209CD/ LBT-D259CD/LBT-D309CD/LBT-D359CD.

SPECIFICATIONS

Turntable	
Platter	30cm (12 in.)
Motor	DC servo motor
Drive system	Belt drive
Speed	33⅓ rpm/45 rpm switchable
Wow and flutter	0.2% (WRMS)
Signal-to-noise ratio	60 dB (DIN-B)
Automatic System	Return, reject
Tonearm	
Type	Dynamically balanced
Pivot-to-stylus length	203 mm (8 in.)
Overall arm length	235 mm (9¼ in.)
Cartridge	
Type	Moving magnet type
Frequency response	20 Hz-20 kHz
Stylus	ND-155G
General	
Dimensions	355 × 94 × 345 mm(w/h/d) (14 × 3¾ × 13⅝ inches)
Weight	Approx. 2.5 kg (5 lb 8 oz)
Power requirement	US, Canadian model: 120V AC, 60 Hz AEP, Italian, East European, CIS model: 220-230V AC, 50/60 Hz UK model: 12V DC PX, E, Saudi Arabia, Singapore, Malaysia model: 110-120V/220-240V AC, adjustable with the voltage selector, 50/60 Hz Australian model: 240V AC, 50 Hz
Power consumption	4W (except UK model)
Accessory supplied	45-rpm adaptor (1)
Optional accessories	Replacement stylus ND-155G Stat spray XP-C10 Cleaner XP-C1, XP-C2

Design and specifications subject to change without notice.

REPLACING THE STYLUS



Replace the stylus after about 400 hours of use because using a worn stylus will damage records. An ND-155G replacement stylus is available at your Sony dealer.
Be sure to turn the amplifier off before proceeding with replacement.

1. While holding the cartridge, detach the stylus assembly as illustrated.
2. Insert the new stylus into the cartridge.

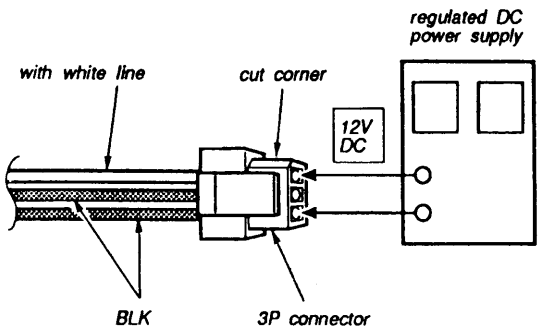
STEREO TURNTABLE SYSTEM

SONY®

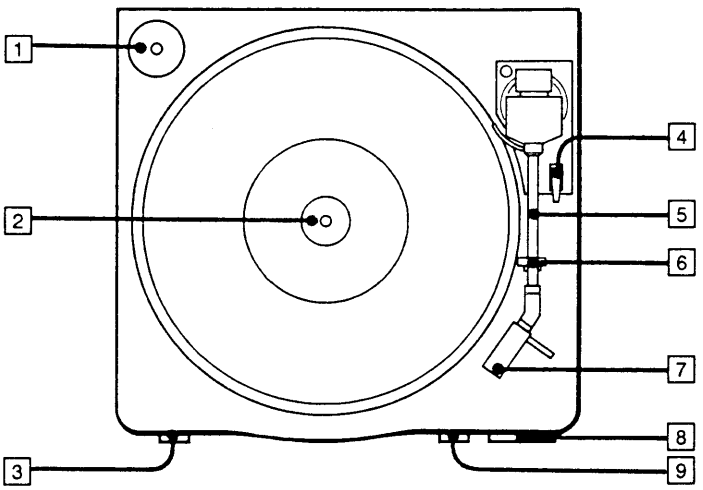
REPAIRING PRECAUTION (PS-LX52P only)

[To supply B+voltage]

The power of this unit is fed from HST model. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.



LOCATION OF CONTROLS



1 **45-rpm adaptor**

2 **Center spindle**

3 **POWER switch** (PS-LX52 only)

4 **Cueing lever**

5 **Tonearm**

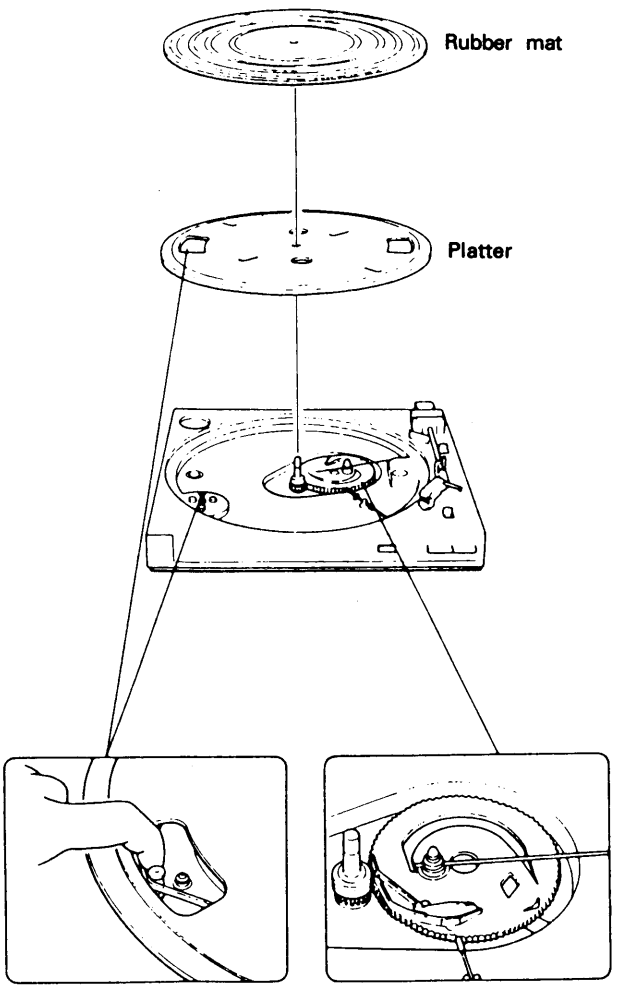
6 **Arm rest**

7 **Cartridge**

8 **REJECT button**

9 **Speed selector**

TURNTABLE ASSEMBLY

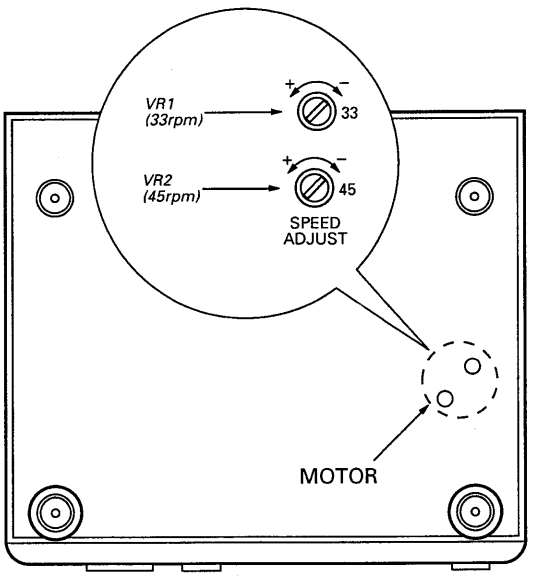


Hook the belt on the motor pulley.
If the belt is removed from the platter, replace it with the glossy side outward.

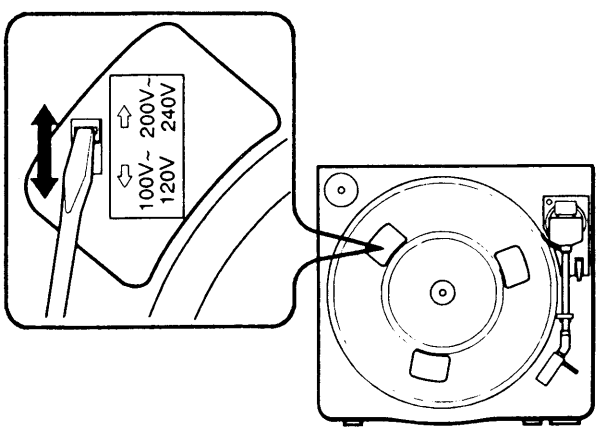
Speed Adjustment

Note: Be sure to perform 45rpm adjustment before 33rpm.

1. Place a stroboscope board on the turntable sheet.
2. Set the SPEED switch to 45.
   Press the START button.
   Adjust VR2 so that the striped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 33.
   Adjust VR1 in the same way.



FRONT SIDE



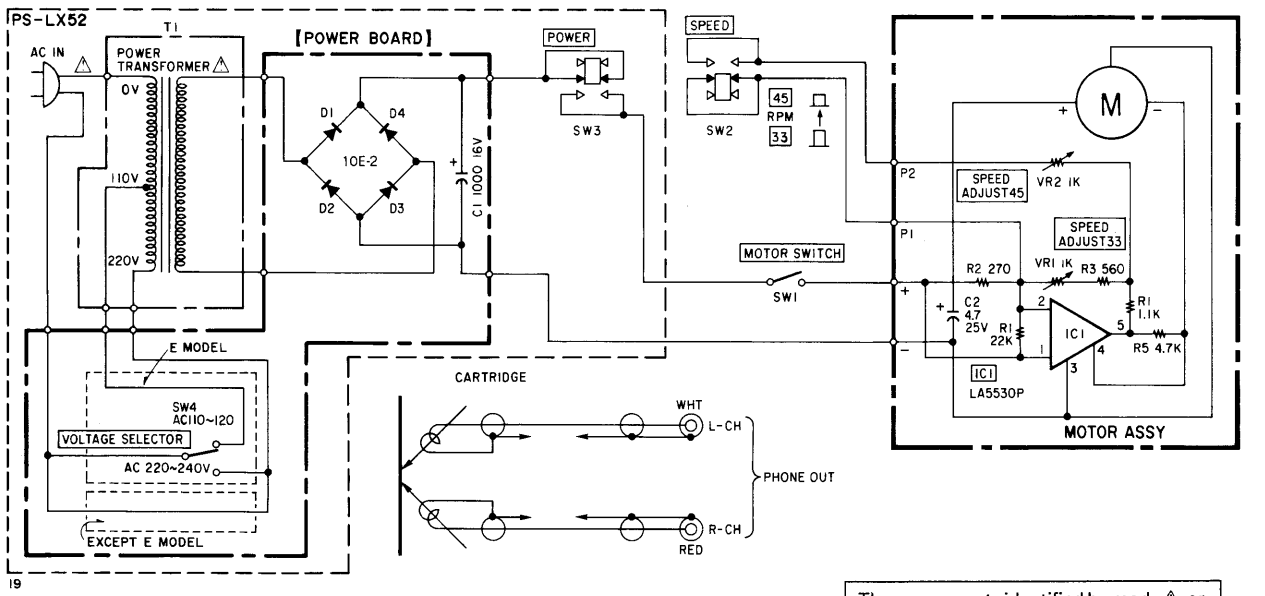
Setting the Voltage Selector

PS-LX52 (E, Saudi Arabia, PX, Singapore, Malaysia model)

For customers of the model equipped with the voltage selector

Check to confirm that the voltage selector is set to the local power line voltage. If not, set the voltage selector to the correct position before connecting the AC power cord to a wall outlet.

SCHEMATIC DIAGRAM



NOTE:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

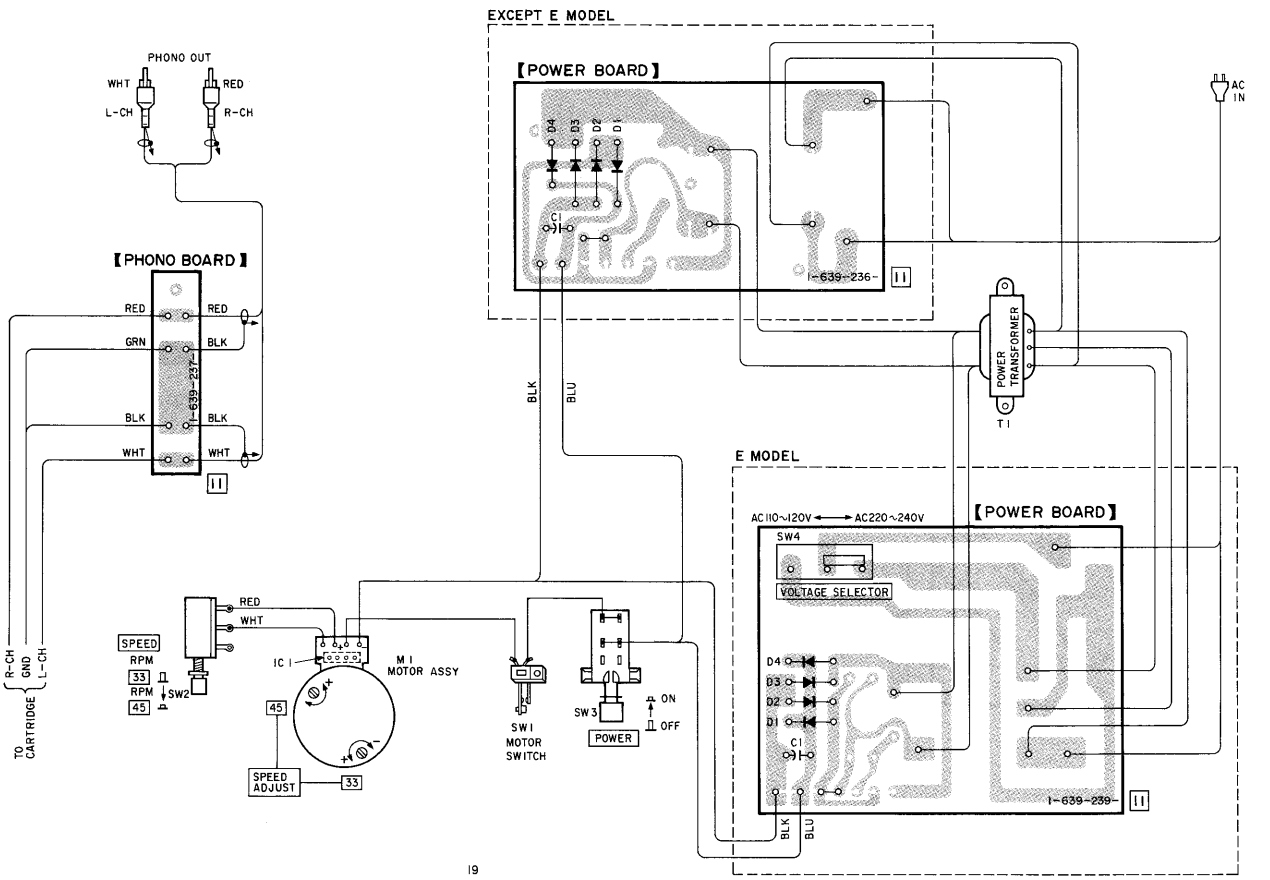
- Switches :

Ref.No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF

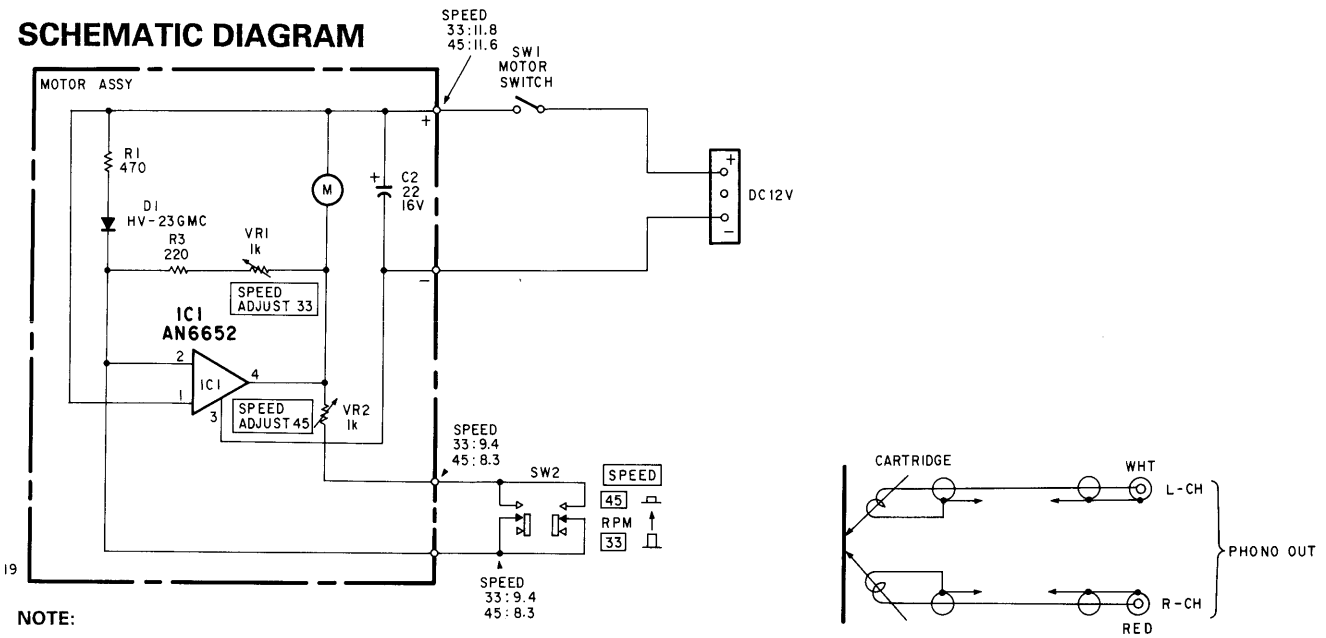
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

WIRING DIAGRAM



SCHEMATIC DIAGRAM



NOTE:

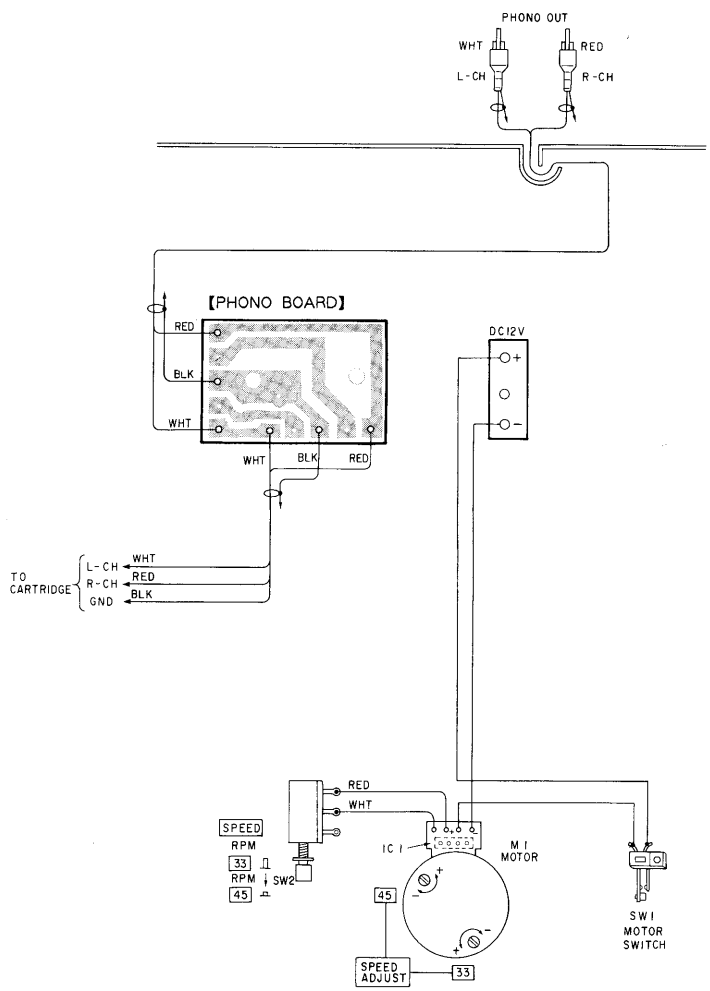
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

- Switches :

Ref.No.	Switch	Position
SW1	MOTOR	OFF
SW2	SPEED	33
SW3	POWER	OFF

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

WIRING DIAGRAM



EXPLODED VIEW [PS-LX52]

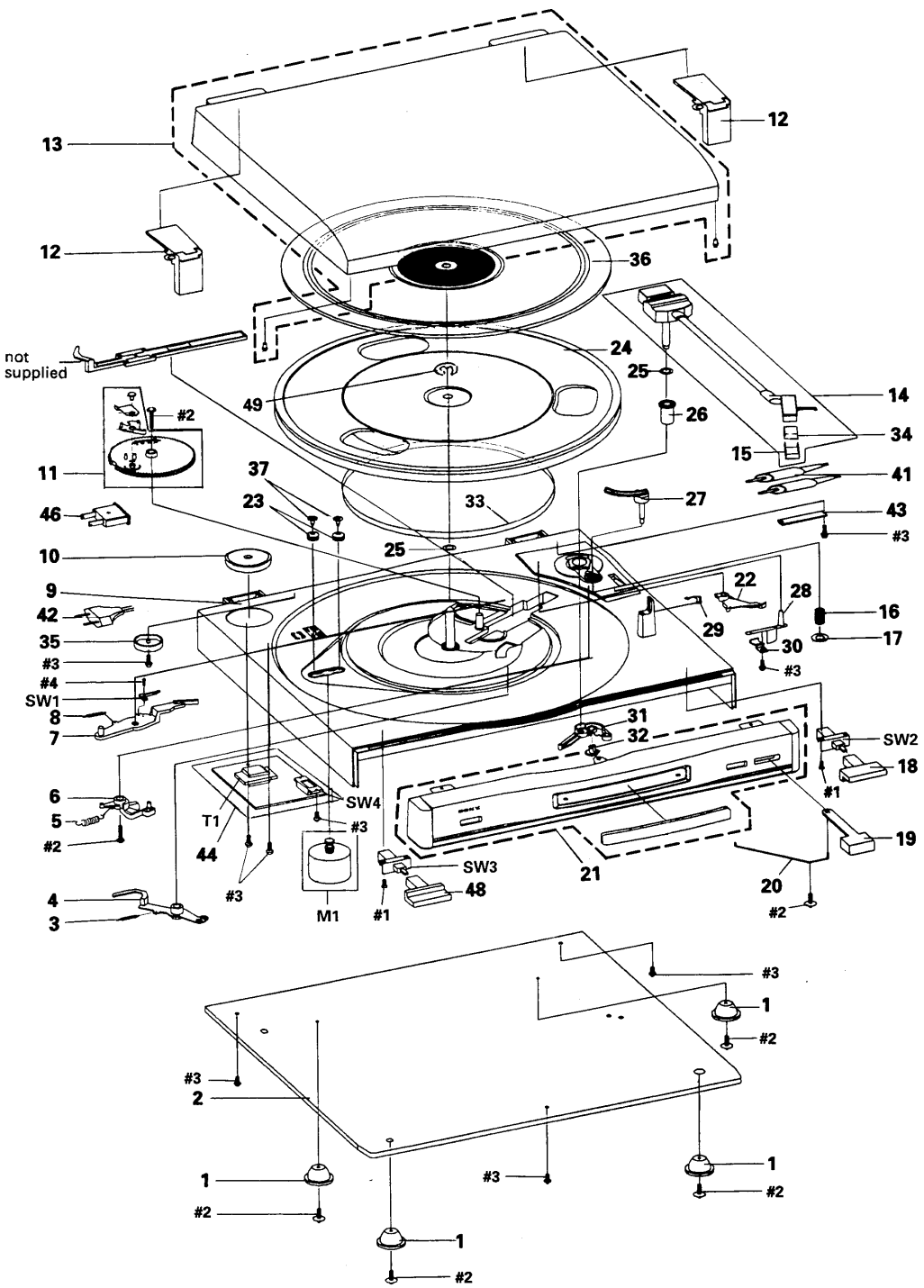
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are in dicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Screw(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

- PX, Saudi Arabia, Singapore and Malaysia models are identical to E model.
- Italian, EE, and CIS models are identical to AEP model.
- AUS: Australian model
- EE: East European model



Ref. No.	Part No.	Description	Remarks
1	4-950-472-01	FOOT	
* 2	4-958-328-01	COVER-BOTTOM	
3	4-950-453-01	SPRING-REJECT	
4	4-950-452-01	LEVER-REJECT	
5	4-950-455-01	SPRING-ELEVATOR	
6	4-950-454-01	ELEVATOR	
7	4-950-463-01	ARM-CONTROL	
8	4-950-464-01	SPRING-CONTROL ARM	
* 9	4-950-431-01	CABINET-UPPER	
10	4-950-467-01	ADAPTOR-45RPM	
11	A-4660-140-A	GEAR ASSY, RING	
12	4-950-432-01	HINGE	
13	A-4660-138-A	COVER ASSY, DUST	
14	A-4660-384-A	ARM ASSY, TONE	
15	4-944-756-01	STYLUS (ND-155G)	
16	4-950-442-01	SPRING-ELEVATION	
17	4-950-444-01	WASHER-C/S	
18	4-956-873-01	BUTTON-SPEED	
19	4-956-872-01	BUTTON-REJECT	
20	4-950-448-01	LINK-REJECT	
21	A-4660-361-A	PANEL (G) ASSY, FRONT	
22	4-953-060-01	LEVER, SWITCH	
23	4-950-470-01	CUSHION-MOTOR	
24	4-950-433-01	PLATTER	
25	4-950-435-01	SPACER	
26	4-950-436-01	BUSHING-TONE ARM	
27	4-950-437-01	ARM-ELEVATION	
28	4-950-440-01	LEVER-CUEING	
29	4-950-439-01	LOCKER-ARM	
30	4-950-441-01	BRACKET-CUEING	
31	4-950-450-01	ARM-FEED	
32	4-950-451-01	CAM-ADJUST	
33	4-950-434-01	BELT	
34	4-944-756-01	CARTRIDGE (AT-3600LAX)	
* 35	4-950-514-01	WASHER CODE	
36	A-4660-142-A	RUBBER ASSY, SHEET	
37	4-950-469-01	SCREW-SETTING MOTOR	
41	1-590-871-11	CORD, CONNECTION (3 CORE)	
⚠42	1-590-836-11	CORD, POWER (E)	
⚠42	1-551-294-11	CORD, POWER (AEP)	
⚠42	1-696-382-11	CORD, POWER (US, Canadian)	
⚠42	1-696-848-11	CORD, POWER (AUS)	
43	1-639-237-11	PHONE BOARD	
44	1-639-239-11	POWER BOARD (E)	
44	1-639-236-11	POWER BOARD (EXCEPT E)	
⚠46	1-693-159-11	ADAPTER, AC (E)	
48	4-956-874-01	BUTTON POWER	
49	4-953-059-01	E RING	
M1	A-4660-141-A	MOTOR ASSY	
SW1	1-572-746-11	SWITCH, LEAF	
SW2	1-572-744-11	SWITCH, PUSH (2 KEY) (SPEED)	
⚠SW3	1-572-744-11	SWITCH, PUSH (POWER)	
⚠SW4	1-572-745-11	VOLTAGE SELECTOR (E)	
⚠T1	1-450-508-11	TRANSFORMER, POWER	

ELECTRICAL PARTS LIST [PS-LX52]

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  MF : μF, PF : μμF

- PX, Saudi Arabia, Singapore and Malaysia models are identical to E model.
- Italian, EE, and CIS models are identical to AEP model.
- AUS: Australian model
- EE: East European model

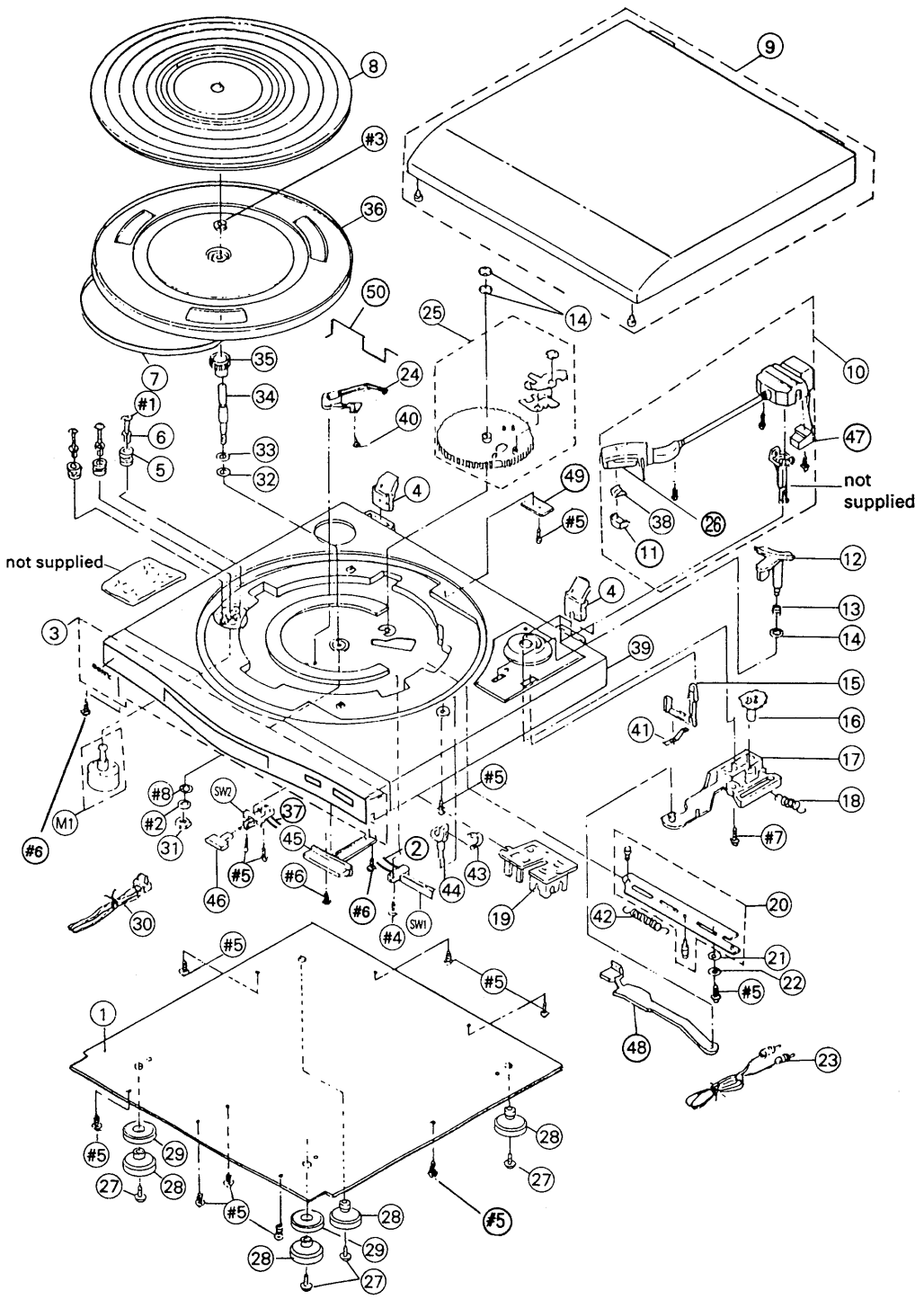
Ref. No.	Part No.	Description	Remarks
	1-639-239-11	POWER BOARD (E)	
	1-639-236-11	POWER BOARD (EXCEPT E)	
		**********	
		< CAPACITOR >	
C1	1-124-360-00	ELECT 1000μF 20% 16V	
		< DIODE >	
D1-4	8-719-200-02	DIODE 10E-2	
		**********	
		MISCELLANEOUS	
		**********	
41	1-590-871-11	CORD, CONNECTION (3 CORE)	
⚠42	1-590-836-11	CORD, POWER (E)	
⚠42	1-551-294-11	CORD, POWER (AEP)	
⚠42	1-696-382-11	CORD, POWER (US, Canadian)	
⚠42	1-696-848-11	CORD, POWER (AUS)	
43	1-639-237-11	PHONE BOARD	
⚠46	1-693-159-11	ADAPTER, AC (E)	
SW1	1-572-746-11	SWITCH, LEAF	
SW2	1-572-744-11	SWITCH, PUSH (2 KEY) (SPEED)	
⚠SW3	1-572-744-11	SWITCH, PUSH (POWER)	
⚠SW4	1-572-745-11	VOLTAGE SELECTOR (E)	
⚠T1	1-450-508-11	TRANSFORMER, POWER	
		**********	
		ACCESSORIES & PACKING MATERIALS	
		**********	
*	4-947-532-01	SNOW BOX (L)	
*	4-947-533-01	SNOW BOX (R)	
*	4-956-071-01	INDIVIDUAL CARTON	
	3-756-211-11	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (AEP, Canadian)	
	3-756-211-21	MANUAL, INSTRUCTION (English) (US)	
	3-756-211-41	MANUAL, INSTRUCTION (German, Dutch, Swedish, Italian) (AEP)	
	3-756-211-51	MANUAL, INSTRUCTION (English, French, Spanish, Chinese) (E, AUS)	
	3-756-211-61	MANUAL, INSTRUCTION (English, German, Polish, Russian) (EE, CIS)	
		**********	
		HARDWARE LIST	
#1	7-685-246-19	SCREW +KTP 3X8 TYPE2 NON-SLIT	
#2	7-685-903-21	SCREW +PTPWH 3X8 TYPE2	
#3	7-685-546-19	SCREW	
#4	7-685-104-11	SCREW +P 2X6 TYPE2 NON-SLIT	

EXPLODED VIEW [PS-LX52P]

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Screw(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.



Ref. No.	Part No.	Description	Remarks
1	4-950-488-01	BOTTOM BOARD	
2	1-696-144-11	WIRE (45) RED	
3	A-4660-303-A	PANEL (G) ASSY, FRONT	
4	4-947-476-01	HINGE	
5	4-947-505-01	CUSHION, MOTOR	
6	4-947-504-01	COLLAR	
7	4-947-503-01	BELT	
8	A-4674-087-A	TURN TABLE MAT ASSY	
9	A-4604-946-A	DUST COVER ASSY	

Ref. No.	Part No.	Description	Remarks
10	A-4604-940-A	ARM ASSY, TONE	
11	4-948-095-01	COVER CARTRIDGE	
12	4-947-466-01	TONE ARM ELEVATOR	
13	4-947-467-01	SPRING (6)	
14	4-947-514-01	4MM CS RING	
15	4-947-468-01	LEVER, CUEING	
16	4-947-470-01	ADJUST CAM	
* 17	4-947-471-01	LINK, RETURN	
18	4-947-472-01	SPRING (9-1)	
19	4-956-998-01	BUTTON BASE	
20	A-4660-302-A	LEVER RETURN ASSY	
21	3-659-350-00	WASHER	
22	4-890-173-00	WASHER	
23	1-555-116-11	PHONO CORD	
24	4-947-495-01	WIPER REJECT	
25	A-4604-916-A	GEAR ASSY, SPUR	
26	1-251-028-11	CARTRIDGE (MAIN)	
27	4-950-497-01	FOOT SEAT	
28	4-950-490-01	PLASTIC STAND	
29	4-950-489-01	FOOT RING	
30	1-557-109-21	DC CORD	
31	4-947-510-01	NUT	
32	3-451-162-00	WASHER (56)	
33	3-701-445-21	WASHER	
34	4-947-498-01	STELL BALL	
35	4-947-497-01	GEAR	
36	4-947-494-01	TURNTABLE PLATTER	
37	1-696-143-11	WIRE (30) (WHT)	
38	4-951-290-01	STYLUS (CN234)	
39	4-947-475-01	MAIN CABINET (G)	
40	4-947-496-01	SPRING (34)	
* 41	4-947-477-01	CUEING (BASE)	
42	4-947-485-01	SPRING (22)	
43	4-947-490-01	ARM CLIP	
44	4-947-491-01	ARM REST	
45	4-956-997-01	KNOB REJECT	
46	4-956-996-01	KNOB SPEED	
47	4-947-464-01	COUNTER WEIGHT	
* 48	4-947-487-01	RETURN LINK	
49	1-644-410-11	P.C BOARD	
50	4-948-101-01	SPRING (38)	

ELECTRICAL PARTS LIST [PS-LX52P]

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Ref. No.	Part No.	Description	Remarks
23	1-555-116-11	PHONO CORD	
30	1-557-109-21	DC CORD	
* 49	1-644-410-11	P.C BOARD	
M1	A-4604-945-A	MOTOR ASSY	
SW1	1-570-666-11	SWITCH (MOTOR)	
SW2	1-571-089-11	PUSH SWITCH (SPEED)	
**********			
	ACCESSORIES & PACKING MATERIALS		
	**********		
*	4-947-532-01	SNOW BOX (L)	
*	4-947-533-01	SNOW BOX (R)	
*	4-957-002-01	CARTON	
**********			

HARDWARE LIST

#1	7-621-773-87	SCREW +B 2.6X10
#2	7-623-210-22	SW4, TYPE 2
#3	7-624-110-04	STOP RING 6.0, TYPE-E
#4	7-685-105-19	SCREW +P 2X8 TYPE 2 NON-SLIT
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE 2 IT-3
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE 2 IT-3
#7	7-685-645-79	SCREW +BVTP 3X6 TYPE 2 IT-3
#8	7-688-005-01	W5, SMALL

English
94F0567-1
Printed in Japan
© 1994. 6

9-957-538-12

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

Published by Home A&V Products Div.
Quality Engineering Dept.

PS-LX52/LX52P

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
Australian Model
PS-LX52
UK Model
PS-LX52P

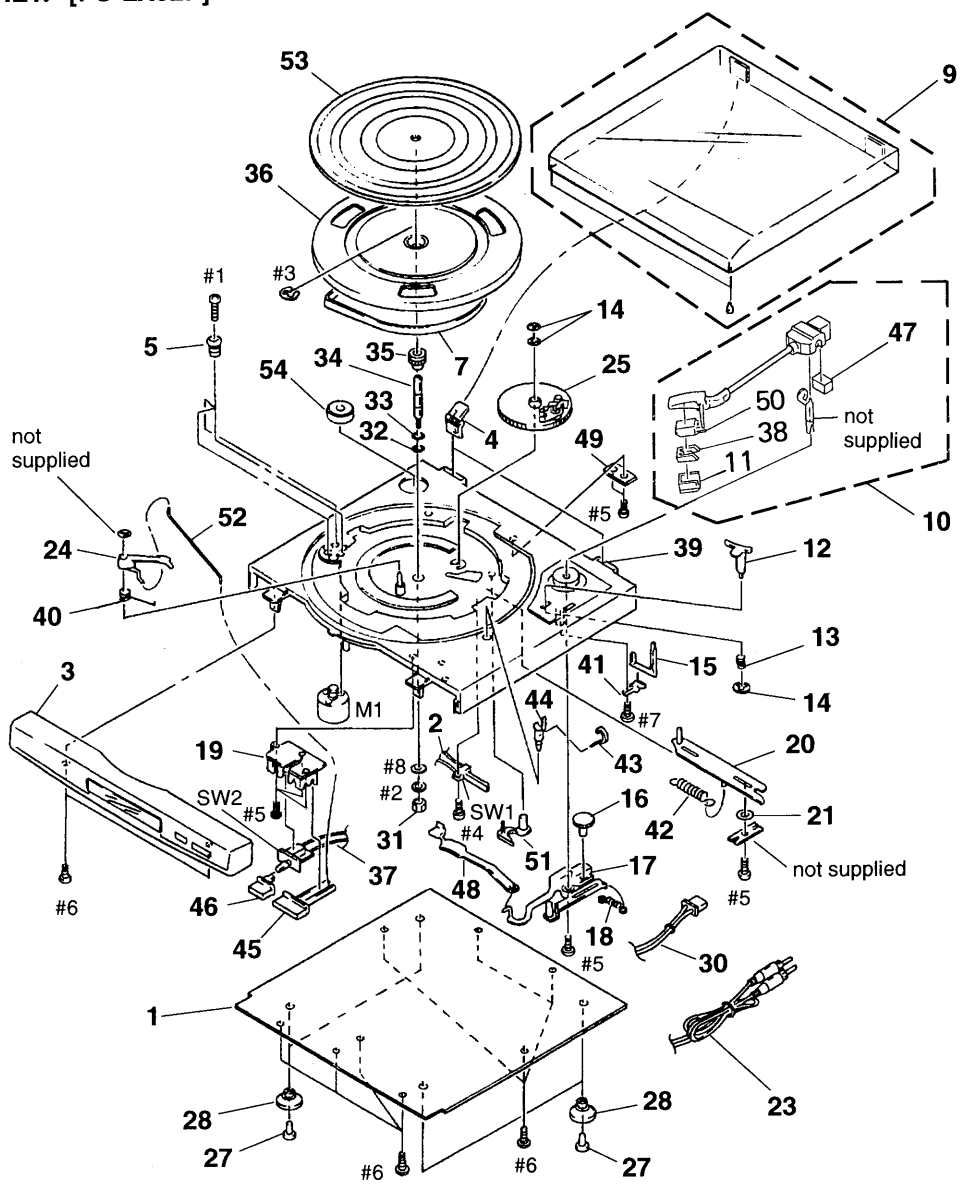
CORRECTION-1

Correct your service manual as shown below.

Subject: Correction of EXPLODED VIEW (PS-LX52P)

(SPM-95043)

EXPLODED VIEW [PS-LX52P]



Note:

- Item marked "*" are not stocked since they are seldom required for routine services. Some selay should be anticipated when ordering these items.
- The mechanical oarts with no refernce number in the exploded views are not supplied.

Ref. No.	Part No.	Description	Remark
1	4-950-488-01	BOTTOM BOARD	
2	1-696-144-11	WIRE (45) (RED)	
3	A-4660-303-A	FRONT PANEL ASSY	
4	4-947-476-01	HINGE	
5	4-947-505-01	CUSHION MOTOR	
7	4-947-503-01	BELT	
9	A-4604-946-A	DUST COVER ASSY	
10	A-4604-940-A	ARM ASSY, TONE	
11	4-948-095-01	COVER, CARTRIDGE	
12	4-947-466-01	TONE ARM ELEVATOR	
13	4-947-467-01	SPRING (6)	
14	4-947-514-01	4MM CS RING	
15	4-947-468-01	LEVER, CUEING	
16	4-947-470-01	ADJUST CAM	
* 17	4-947-471-01	LINK, RETURN	
18	4-947-472-01	SPRING (9-1)	
19	4-956-998-01	BUTTON BASE	
20	A-4660-302-A	LEVER RETURN ASSY	
21	3-659-350-00	WASHER	
23	1-555-116-11	CORD, PHONE	
24	4-947-495-01	WIPER REJECT	
25	A-4604-916-A	GEAR ASSY, SPUR	
27	4-950-497-01	FOOT SEAT	
28	4-950-490-01	PLASTIC STAND	
30	1-557-109-21	CORD, DC	
31	4-947-510-01	NUT	
32	3-451-162-00	WASHER (56)	
33	3-701-445-21	WASHER	
34	4-947-498-01	STELL BALL	
35	4-947-497-01	GEAR	
36	4-947-494-01	TURNTABLE PLATTER	
37	1-696-143-11	WIRE (30) (WHT)	
38	4-951-290-01	STYLUS (CN-234)	
39	4-947-475-01	MAIN CABINET (G)	
40	4-947-496-01	SPRING (34)	
41	4-947-477-01	CUEING (BASE)	
42	4-947-485-01	SPRING (22)	
43	4-947-490-01	ARM CLIP	
44	4-947-491-01	ARM REST	
45	4-956-997-01	KNOB REJECT	
46	4-956-996-01	KNOB SPEED	
47	4-947-464-01	COUNTER WEIGHT	
* 48	4-947-487-01	RETURN LINK	
* 49	1-644-410-11	PC BOARD	
50	1-251-028-11	CARTRIDGE (MAIN)	
51	4-957-000-01	PLASTIC RETURN	
52	4-948-101-01	SPRING (38)	
53	A-4674-087-A	TURN TABLE MAT ASSY	
54	3-701-806-00	ADAPTOR, 45	
M1	A-4604-945-A	MOTOR ASSY	
SW1	1-570-666-11	SWITCH (LEAF)	
SW2	1-571-089-11	PUSH SWITCH (SPEED)	
#1	7-621-773-87	SCREW (64)	
#2	7-623-210-22	WASHER (57)	
#3	7-624-110-04	6MM E RING	
#4	7-685-105-01	SCREW (59)	
#5	7-685-647-79	SCREW (58)	
#6	7-685-646-79	SCREW (60)	
#7	7-685-645-79	SCREW (68)	
#8	7-688-005-01	WASHER (69)	

English
9510593-1
Printed in Japan
© 1995. 9

9-957-538-91

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

Published by Home A&V Products Div.
Quality Engineering Dept.